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of the

Medical Association of the State of ALABAMA



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333

ml. 42

MDS



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Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

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Managing Editor

L. P. Patterson Montgomery

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Warnings: Use during pregnancy is to be avoided.

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determinations of ketones in the blood and urine should be made in diabetics previously stabilized on phenformin, or phenformin and insulin, who have become unstable. If electrolyte imbalance is suspected, periodic determinations should also be made of electrolytes, pH, and the lactate-pyruvate ratio. The drug should be withdrawn and insulin, when required, and other corrective measures instituted immediately upon the appearance of any metabolic acidosis.

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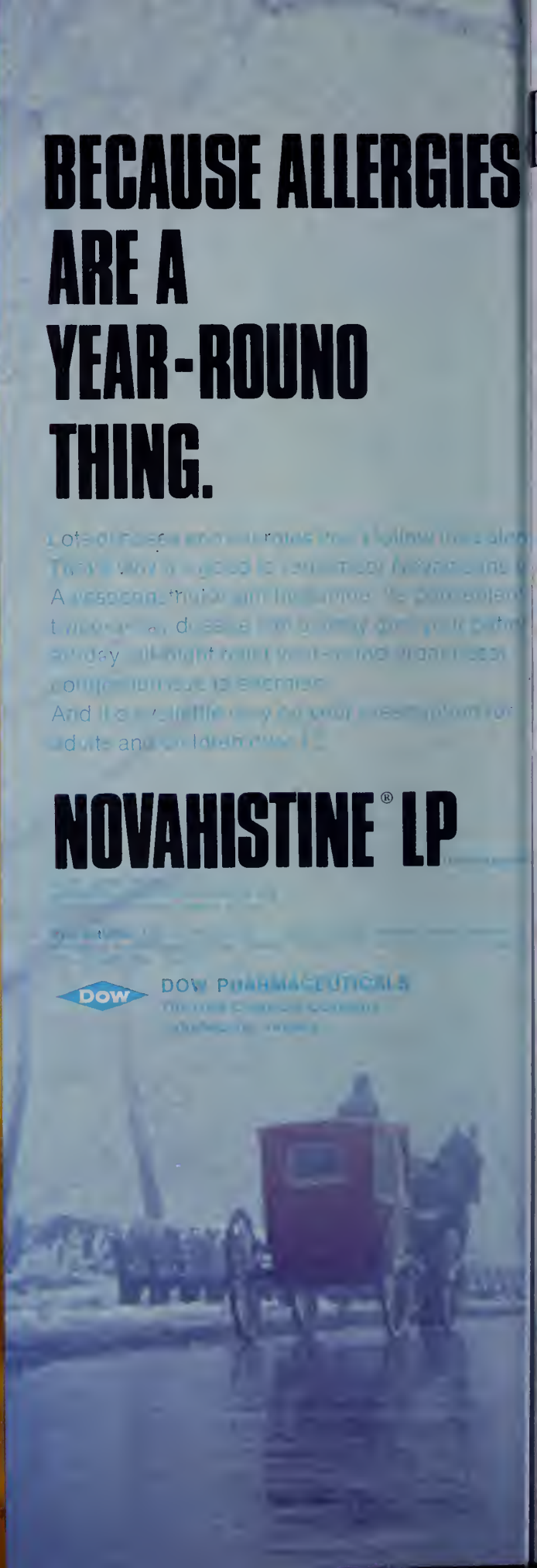
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President's Page

Health Care Delivery

It is my feeling that the criticism directed toward our State Board of Health, our Health Department and the delivery of health care in general in this State is merely a reflection of the influence of the mass media that has, in recent years, warmed to its indictment of the medical establishment with baffling enthusiasm.

This is no unique approach. All those countries now under totalitarianism first directed their propaganda against Medicine. The Socialists know that public opinion is more easily swayed, emotions more easily stirred by propaganda against Medicine than against any other profession.

The current popular theme in Washington politics is that of "health crisis"—"scrub" the doctors and their private practices, and develop health service systems; "teams of providers" which are regulated, franchised and subsidized; blame the doctors for poverty and hunger; forget that a vast number of Americans eat, drink and smoke themselves to death. That is the doctors' fault. Ignore data that shows Americans to have by far the best health care delivery system in the world.

Hold symposia in which the celebrities of sociology, economy, law, religion, and politics (representatives of the public) are urged to tell the doctors what ails Medicine and how to cure it.

Oddly enough, a segment of Medicine, itself, principally the younger physicians, have fallen for this line of thinking. This is brought out through the results of a recent poll which showed that 34 per cent of physicians under 35 years of age favor the Ken-



DR. PHILLIPPI

nedy proposal for compulsory national comprehensive health care.

Why is the present medical establishment—and I do not mean just the AMA—against compulsory comprehensive health care? We are told that it is because the doctor is selfish. The medical establishment in general is against such a concept because it feels it would not be in the best interest for our country. We could not remain a republic under such a program because the financial expenditure entailed by such a program alone would result in national socialism. Yet, such a program is presented in the light that it would bring about a reduction in the cost of health care through preventive measures. This, I think, is the biggest farce yet envisioned.

I feel that some form of voluntary national health insurance may be needed. We must insist that such a program come under professional or physician control and that the broad concept of comprehensive health care be diminished. We must insist on the pre-

servation of private office practice because this is the most economical method of delivering health care. We must insist on more out-patient utilization of diagnostic studies when practical because of the expense of hospitalization.

We ask that the Alabama Health Study Commission honestly weigh the evidence of the effectiveness of our present medical establishment and of the direction it is now taking before recommending change. I feel that physician output, and the output of paramedical personnel such as the graduate nurse, the L. P. N. and others, is being increased as rapidly as possible.

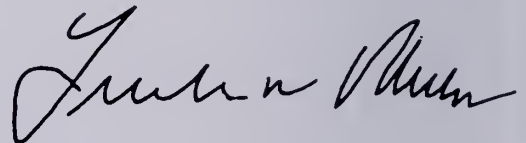
We ask the Commission to review the effectiveness of other State Boards of Health that have been diluted from physician control, such as that of Kentucky, which has only four physician members of a 19-member board.

I ask Representative Bert Bank if he has not been influenced by the mass media

propaganda. I ask him to honestly tell me how a paramedical member of a Board of Health, such as a dentist or pharmacist, a graduate nurse, or others, can as effectively serve on this Board as a physician.

I ask Representative Bank that once he has succeeded in diluting the physician control of this Board just how he intends to prevent its continued dilution and deterioration.

I ask Representative Bank if he honestly and sincerely believes that the dilution of our State Board of Health by non-physician members to be in the best interest of the people of Alabama.



Frank M. Phillippi, Jr., M. D.

The Woman's Auxiliary

President, Mrs. George Hansberry
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WAMASA Editor, Mrs. William L. Smith

AUXILIARY PLEDGE

"I pledge my loyalty and devotion to the Woman's Auxiliary to the American Medical Association. I will support its activities, protect its reputation and ever sustain its high ideals."

Happy Birthday!

The St. Francis Hotel in San Francisco was the scene of the Golden Anniversary Celebration for the Woman's Auxiliary to the American Medical Association. A large number of Alabama Auxiliary members attended the meeting. The festivities began on Sunday afternoon with a joint session with the American Medical Association House of Delegates. This was a first in the history of these two groups; and the highlight of the celebration was a tribute to the accomplishments of the first 50 years of the Auxiliary. There was lots of fun, information, and history packed into the sessions. Speakers like Dr. William H. Masters, Mrs. Virginia E. Johnson Masters, and Art Linkletter made it even more exciting.

I would like to share some of the Auxiliary history with you. It really started in Shawnee Oklahoma 15 years before the National Auxiliary was organized. In 1907, when Oklahoma was still the Wild West, the doctors of this town needed their wives to entertain the out-of-town Dr.'s wives during the annual meeting of the State Medical Association. Dr. Walter C. Bradford came home and announced that the gallant M. D.'s would allow their wives to come along to the meeting. However, he admitted he didn't know what they would do with them. It didn't take Mrs. Bradford long to come up with the idea of a Medical Auxiliary. The Woman's Auxiliary to the Pottawatomie County Medical Society was the first in the Nation. After making plans for entertaining the visiting wives, a committee was appointed to visit the local hospital and find out what it would cost to furnish a room to be used by charity patients. A month



MRS. HANSBERRY

later when the women came to the state meeting, a State Medical Auxiliary was organized, and Mrs. Bradford was elected president. She is still active in auxiliary work, and is known as "Mrs. Auxiliary" in Oklahoma.

At almost the same time, counties and states throughout the country were organizing Auxiliaries with no knowledge of what other states were doing. Their basic goals and objectives were very similar, and remarkably coincide with those of today. "To bring the wives of physicians together in a spirit of good fellowship" was the object of the South Dakota State Auxiliary which was organized in 1910. At about the same time, Minnesota's Hennepin County Auxiliary got

underway when 40 women met in Minneapolis. Doctor's wives in York County Maine, started an organization called the "Daughters of Hygeia" in 1913. They assisted their Medical Society, supported a day nursery, and a French war orphan.

Dallas Texas was the site of another organizational meeting. In 1917 the Woman's Auxiliary to the Dallas County Medical Society came into existence. These women planted the idea for other County Auxiliaries, and by 1918 three hundred and fifty women agreed to organize a State Auxiliary. At their fourth annual meeting, reports from Auxiliaries told of "weed eradication for hay fever victims," "garbage removal," "securing a city board of health," "County tuberculosis survey," and "aid for public health and war Nurses." This El Paso meeting became a historic one when Mrs. Samuel Clark Red, their state president, proposed that Texas

undertake the organization of a National Auxiliary. Mrs. Red was then directed to present the resolution to the AMA at their annual meeting which would be held in St. Louis in May 1922. The approval by the AMA House of Delegates was recorded in the *Official Actions* with the notation that "this does not appear to involve any financial or other obligation on the part of the association."

At a time when we, especially husbands, believed that a woman's place was in the home and not in a committee room, this approval by the Nation's physicians could be called a minor miracle, or was it wisdom? The brave lady from Texas charmed AMA members by wearing a fashionable low-cut evening gown of Texas blue-bonnet during a dinner musicale. She became the first president of the Woman's Auxiliary to the American Medical Association. Later she said "Had I then known that august body as I do now, I should never have had the nerve to beard the lion in his den as I did in St. Louis."

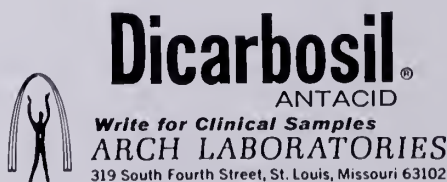
The Woman's Auxiliary has had lots of daring women since this first meeting 50 years ago. Alabama has been blessed with many of these leaders. One year after the organization of the National Auxiliary, the Woman's Auxiliary to the Medical Association of the State of Alabama was organized in Mobile. Mrs. Seale Harris was the first state president, and in 1925 she became the second national president. We have had two more national presidents from Alabama, Mrs. William G. Thuss in 1962 and Mrs. John M. Chenault in 1969. We are proud of our heritage, and would like to think that Auxiliary members of today are no different from those early pioneers who were busy, resourceful, concerned and diplomatic.

A. Rae Hansberry

A. Rae Hansberry
President



*"My secret?
For heartburn I always
use 'Dicarbosil'."*



Jackie hemorrhoids

H. C., 40, taxicab driver, married with four children. Complains of anorectal pain, itching and irritation. Works long hours often in extreme heat in non-air conditioned cab. Eats a great deal. Sudden anal swelling two days ago. Similar episode when he was 24 years old. Examination reveals large prolapsing hemorrhoids, internal and external hemorrhoids.



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A Question Needing An Answer

With a resounding "no" vote that reverberated through the hall like a clap of thunder, MASA's College of Counsellors and House of Delegates turned thumbs down on a proposed mechanism for funding a program of continuing medical education in this state.

While the program itself had been approved at the 1970 Annual Session in Mobile, no provision had been made for financing the proposition which could cost as much as \$80,000 to \$100,000 annually.

In the interim between the 1970 Annual Session and the 1972 Annual Session, it had been determined that the Alabama Regional Medical Program could fund about 60 per cent of the total cost. The remaining money would have to come from local sources—either the Association treasury or from individual members via registration fees, etc.

At its March meeting, the Board of Censors approved in principle a plan for joint financial participation of MASA and ARMP up to a maximum cost of \$50,000 in the initial stages.

A portion of the MASA contribution would have been in-kind services. Space for the Director of Education (a physician) and his staff, office equipment and supplies, utilities, janitorial services, etc., would have been provided at the Central Office. Federal funding would have been sufficient to meet remaining costs.

To reimburse MASA for its out-of-pocket cost in providing the above space and services, the Board of Censors recommended

that a rebate of two-fifths of the state license fee which is now being returned annually to the Board of Censors of each county medical society be allocated for this specific purpose.

The rebate of a portion of the physicians' license fees, old-timers recall, was enacted into law (Title 51, Section 552) for the purpose of enabling the profession to improve its competence.

We should hastily add, however, that the law does not specifically state the purpose for which the Board of Censors of the county medical society shall expend the rebate, only that it be disbursed by the treasurer of the society.

Physicians pay the license in an amount based on the population of the counties. For instance, in cities or towns of over 5,000 population, the license fee is \$25; from 1,000-5,000, the fee is \$10; all other places whether incorporated or not, the fee is \$5.

The total annual rebate amounts to approximately \$20,000 per year. The largest amount is returned to Jefferson County, slightly more than \$6,000. Mobile County receives \$3,300; Montgomery County, \$1,500; Madison County, \$1,400 after which the rebates scale downward to as low as \$7.80 for Choctaw, Greene and Lowndes Counties.

In an address to the 1972 Annual Meeting of MASA, Dr. Margaret S. Klapper, Director of the Division of Continuing Medical Education, University of Alabama School of Medicine, and Chairman of the Association's Committee on Education, painted graphical-

ly a picture of the necessity for an Association-sponsored program to provide postgraduate education to its membership.

In her address she stated:

"Continuing education is a basic ingredient for physician competence which in turn is a fundamental element of quality medical care. The role of the physician as a "life-time" student is accepted, at least philosophically, by most if not all of us. We each accept a major responsibility for our own continuing education and continued professional growth, and the great majority of us are extremely well-motivated to be certain we are doing a good job. But with whom do we share this responsibility, where do we go for direction and leadership in this world of expanding medical knowledge?"

More important for the consideration of the membership of this Society is not whether a program for continuing medical education will be inaugurated in this state but rather, will this Association face up to its responsibility or will it wait for the federal government or some other agency to fulfill the role?

More than forty states have seen the necessity for action. Apparently, some of them were jarred by a recent report from the Department of Health, Education and Welfare in reference to relicensure which stated:

"The typical state requirements may provide adequate safeguards at the initial level of entry into the profession. It is a considerably less effective guarantee, however, against the growing problem of professional obsolescence."

Keyed very closely to the entire problem are the following trends and directions in continuing medical education which reflect the pressures being exerted upon the profession:

- 1) Peer review and the implications of the practical problem-oriented record.
- 2) Relicensure for continued practice.
- 3) Periodic requalification as related to medical society membership.
- 4) Specialty board attitudes toward recertification.
- 5) New approaches to the evaluation of clinical competence.

It is not known to what use the Board of Censors of county societies are putting the monies rebated from state license fees. But one must wonder if it could be utilized for better purposes than to protect the members who paid these fees from further encroachment by outside agencies.

The clap of thunder heard at the Annual Session is thought to be merely the result of the one bolt of lightning generated by the financial difficulties of one of the larger county medical societies. It is felt by this writer that it does not truly reflect the feeling of the membership of the State at large, nor does it reflect broad and sound deliberation. This rebate is not intended to make up dinner deficits, but is expressly for educational purposes. This seems an excellent opportunity to utilize it effectively.

The young are prodigal of life from a superabundance of it; the old are tenacious on the same score, because they have little left, and cannot enjoy even what remains of it.—William Hazlitt

May there never develop in me the notion that my education is complete but give me the strength and leisure and zeal continually to enlarge my knowledge.—Maimonides

There is no more miserable human being than one in whom nothing is habitual but indecision.
—William James

Only those Americans who are willing to die for their country are fit to live.

—Douglas MacArthur.



Testimony of George E. Hardy, Jr., M. D., M. P. H. Health Officer Jefferson County Department of Health

Before the House Subcommittee on Public Health and Environment
of the

House Committee on Interstate and Foreign Commerce

U. S. House of Representatives

Washington, D. C.

on

Thursday, April 27, 1972

My name is George E. Hardy, Jr. I am a physician and serve as Health Officer for the Jefferson County, Alabama, Department of Health, 1912 Eighth Avenue, South, Birmingham, Alabama 35233. With me today is Mr. Clyde A. Sellers, Director of our Bureau of Communicable Disease Control.

Mr. Chairman, it is indeed an honor for me to appear before your Subcommittee once again, and to have an opportunity to offer our support for H. R. 14455, the Communicable Disease Control Bill, by briefly presenting the problems local public health workers face in dealing with communicable disease control. The figures which I shall present are those of Jefferson County, Alabama's largest county with a population of 645,000,

but the circumstances in which we find ourselves are in no way unique.

As you know, communicable disease control has long been a hallmark of public health. The diseases with which we deal are not always exotic, they frequently attack individuals with limited access to medical care, and, most importantly, they have the distinct disadvantage of being not only harmful to the individual so infected, but a threat to the public health as well by virtue of the very nature of their transmissibility. Treatment for a single infection implies far more than an individual therapeutic regimen. The concepts of disease surveillance, casefinding, epidemiologic investigation, prophylactic

(Continued on Page 17)

"The history of science, and in particular the history of medicine... is... the history of man's reactions to the truth, the history of the gradual revelation of truth, the history of the gradual liberation of our minds from darkness and prejudice."

—George Sarton, from "The History of Medicine Versus the History of Art"

**Would it be useful
in clinical practice to have
government predetermine
drugs of choice?**

Opinion

Results of a survey of physicians:

13.3%

Yes, it would be useful.

86.7%

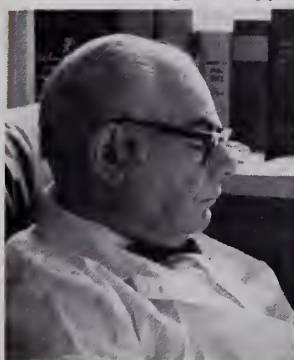
No, it would not be useful.

Dialogue

Would it be useful in clinical practice to have government predetermine drugs of choice?

Doctor of Medicine

Walter Modell, M.D.,
Professor of Pharmacology,
Cornell University
Medical College,
Editor,
Clinical Pharmacology
& Therapeutics,
Drugs of Choice,
Rational Drug Therapy



The proposition that government should determine one or two "drugs of choice" within a given therapeutic class reflects the belief that a similarity in molecular structure insures a close similarity in pharmacologic effect. But this is by no means the rule. An obvious example would be in the field of diuretics, where a small change in chemical structure accounts for substantial dif-

ferences in concomitant effects such as potassium excretion.

Any attempt to dictate the "drug of choice" would be complicated by the fact that some populations demonstrate a bimodal distribution in their reaction to drugs. If the data on drug response are mixed for the total population, one drug will appear to be as useful as the other. But if drug response is reported separately for different segments of the population, drug A will be found to be better for one group and drug B for the other.

It may, of course, be possible to determine drugs of choice in particular categories on a broad statistical basis. But there are always certain patients in whom a drug produces odd, unpredictable or idiosyncratic reactions. So, though a drug might statistically be the most useful one in a given situation, individual variations in response might make it the *incorrect* one.

The point I wish to make is that if two, three, four or more drugs in one class are of approximately equal merit, that in itself is justification for their availability. Exceptional cases do arise in which one drug would be useful to a certain

segment of the population and another drug would be of no use at all. In the practice of medicine, the physician must be prepared to treat the routine as well as the unusual case.

Another objection to the determination of a drug of choice is that precise statements of *relative* efficacy are very difficult to make—much more difficult than statements of efficacy. For example, in testing drug efficacy, it is easy to determine the difference between a drug that is effective in treating a condition and one that is not at all effective. Thus, it is fairly easy to determine whether a drug is more effective than a placebo. But if you compare one drug that is effective with another drug that is also effective, and the relative differences between them are very slight, statements of relative efficacy may be very difficult to make with assurance.

I do not mean to imply that relative efficacy statements are not useful or can never be made. With some groups of drugs (e.g., analgesics), extensive study and precise methodology have yielded useful information on relative efficacy. But in most situations, such information can be acquired only through studies encompassing three to five years of use in many more patients than are used to compare drugs with a placebo for the introduction of a drug into commerce. It is really only after practitioners use a drug extensively that relative safety and efficacy

in practice can really be determined.

The Bureau of Drugs has suggested the package insert as a possible means of communicating information on relative efficacy of drugs to the physician. I find this objectionable, since I do not believe the physician should have to rely on the source for final scientific truth. There is also a practical objection: Since few physicians actually dispense drugs, they seldom see the package insert. In any event, I would maintain that the physician should know what drug he wants and why without depending on the government or the manufacturer to him.

Undoubtedly, physicians are swamped by excess numbers of drugs in so many therapeutic categories. I am well aware that many drugs within such categories could be eliminated without any loss, or perhaps even some profit to the practice of medicine. But, in my opinion, neither the FDA nor any other single group has the expertise and the wisdom necessary to determine the "drug of choice" in areas of medical practice.

Maker of Medicine

Nath G. Kohlstaedt, M.D.,
Vice President,
Medical Research,
Eli Lilly and Company



In my opinion, it is not the function of any government or private regulatory agency to designate a "drug of choice." This determination should be made by the physician after he has received full information on the properties of a drug, when it will be based on experience with this and his knowledge of individual patient who is seeking treatment. An evaluation of comparative efficacy were to be made, particularly by government, at the time a new drug is being approved for marketing, it would be a disservice to medicine and thus to the patient and consumer. For example, when a new therapeutic agent is introduced, on the basis of limited knowledge it may be considered more potent, more effective, or safer than agents already on the market. Conceivably, at the time the new drug is labeled "the drug of choice." But as additional clinical experience is accumulated, new evidence becomes available. It may be apparent

that the established products should not be so easily dismissed.

Variation in patient response to drugs constitutes one of the major obstacles to the determination of "drugs of choice." We are just beginning to open the door on pharmacogenetics, but it is evident that genetic differences cause wide variations in the way drugs are absorbed, metabolized, etc. This fact alone is sufficient to make unrealistic the idea that there is one drug in each class to be used for every human being.

The problem of determining relative drug efficacy is an extremely complicated one. Comparison with other drugs of the same class should not be a prerequisite for marketing a new substance. In some therapeutic areas, it may be difficult to make accurate comparisons. For example, in the treatment of infections it is not possible to conduct crossover studies. Recovery may be influenced by factors which cannot be controlled or measured, i.e., natural host resistance and virulence of infective agents. A drug's acceptability must often be judged on the basis of its own performance, and this may be limited to experience in a relatively small patient population. If the introduction of a new drug must await the adequate establishment of relative efficacy, the duration of clinical trial and extent of studies would be greatly prolonged, particularly for rare or unusual conditions. The availability of a new drug would be delayed. Many patients might suffer needlessly and lives might be lost.

Relative efficacy can best be established by experience in a general patient population through regular channels of clinical practice. The physician considers the patient as a whole, which means the patient often has multiple problems and drugs must be selected with this in mind. Hence, a "drug of choice" in an uncomplicated case may not be the best drug for a patient with associated problems. Publication of well-controlled studies in medical journals may provide comparative evidence; discussions at medical meetings, presentations at postgraduate courses, and the new audiovisual technology may bring evidence to physicians on comparative therapy. In a free medical marketplace, a drug that does not measure up will fall into disuse. For example, broad clinical experience has established vitamin B₁₂ as the "drug of choice" for the treatment of primary pernicious anemia. No amount of advertising or promotional effort by the manufacturer could increase the use of liver extract for this anemia. How-

ever, a physician may wish to employ parenteral liver preparations for a special purpose.

In the field of surgery, peer review in the hospital has brought significant improvement in the use of new techniques and procedures. Something of this nature would be useful in the area of drug therapy. However, it should be developed by the medical profession itself and would necessitate, for its proper function, an improvement in the dissemination of reliable data on clinical pharmacology of drugs under consideration.

Ideally, information on the relative efficacy of drugs should be gathered and assessed by the physicians who actually administer the specific agents to a specific patient population. To do this, they will need even more information on the drugs they use — information that the pharmaceutical manufacturers must begin to provide if government regulation of "drugs of choice" is to be avoided.

Opinion & Dialogue

What is your opinion, doctor?

Send us your comments on the above issue.



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(Continued from Page 12)

treatment, mass or selected community immunization programs, and even quarantine may be involved. These concepts and activities are far beyond the scope of the individual medical practitioner's office, and are so specialized and unique as to warrant continued categorical attention and support.

Permit me to review briefly three areas of communicable disease control activity in Jefferson County—venereal diseases; diseases for which immunizable agents are routinely employed; and tuberculosis.

Venereal Diseases

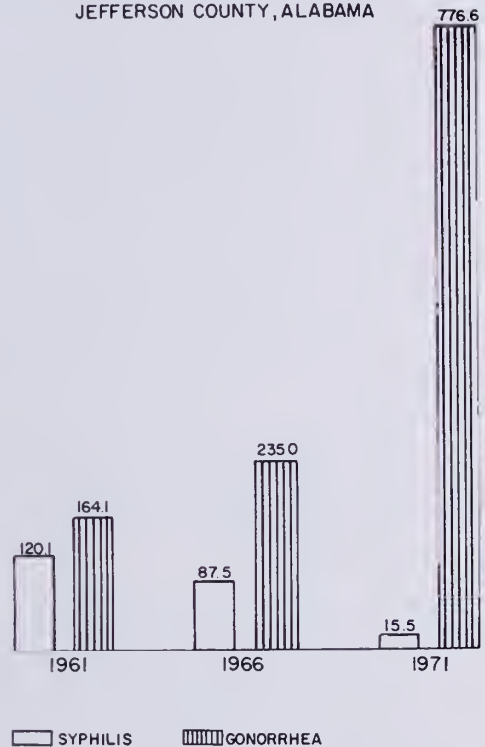
We have been told that the number of reported cases of venereal disease has reached epidemic proportions in the United States; that gonorrhea has become our most common communicable disease, second, if one is a purist, to the common cold; that the incidence of venereal disease is particularly prominent among individuals in the 20-24 year age group and occurring with ever increasing frequency in our teenage population; and that until a successful vaccine for syphilis and rapid serologic screening for gonorrhea become a practical reality, we will have to rely on our current epidemiologic approach to venereal disease control.

In Jefferson County, our experience has paralleled these national trends. Figure 1 shows our reported cases of syphilis and gonorrhea plotted as case rates per 100,000 population at five-year intervals for the past decade. Gains made in syphilis control between 1961 and 1971 are dramatic. In 1967, Birmingham had the rather dubious distinction of ranking first in the nation in primary and secondary syphilis case reports; however, by 1971 we had dropped to 58th among 60 cities with populations of 200,000 or more. This achievement could never have been realized without national program emphasis and concomitant funding to support our epidemiologic interview and prophylactic treatment programs.

Unfortunately, as is the case nationwide, our experience with gonorrhea control has

Fig. 1

SYPHILIS AND GONORRHEA CASE RATES PER 100,000 POPULATION JEFFERSON COUNTY, ALABAMA



not been as good. In fact, in 1971, our case rate was more than twice the national average. On May 1 of this year, we will initiate a recently authorized federal gonorrhea control program—which I am pleased to note has roots in this very Subcommittee—that we trust will be able to help us improve upon the current situation.

As the problems attendant with venereal disease control and the complications of these diseases are known to this Committee, and as there will be others appearing before you today with greater experience in venereal disease control than I, I would note only that our hoped for reduction in gonorrhea like our actual reduction in syphilis will be a transient, temporary phenomenon without a permanent federal commitment to the control of venereal diseases and to a national program of health education embracing the study of these diseases early in one's school years.

Immunization Activities

In presenting our experiences in the area of diseases for which immunizable agents

are routinely employed, I speak not only as a local Health Officer, but as Secretary for the National Action Committee for Childhood Immunizations. This Committee, composed of young physician epidemiologists from across the United States representing state and local health departments, University Medical Centers, and the private practice of medicine, is concerned about the decline in childhood immunization rates in this country—a decline clearly documented by the Federal Government's own Annual Immunization Surveys. The Action Committee has noted that:

- (1) Vaccines are available which can protect every child in the United States against well-known crippling and killing diseases;
- (2) Cost benefit studies clearly demonstrate that the gains from immunization procedures are among the greatest to be achieved from existing public health practices;
- (3) We are *not* now effectively or comprehensively protecting American children with available vaccines; and,
- (4) National recognition of this situation and a long term federal commitment to a coordinated plan for the control of communicable diseases are needed.

In Jefferson County, our federally funded Immunization Project was organized late in 1964. At the time of its inception less than 79 per cent of county newborns were receiving any immunization against diphtheria, tetanus, whooping cough, or polio. Since the implementation of our Project, 93 per cent of county newborns are beginning immunization against these particular diseases; and, since the introduction of our delinquent immunization follow-up for high risk areas in 1969, we have reached an overall level of 80 per cent for such individuals completing their initial immunization series. In fact, this past calendar year was the first time in recent history that Jefferson County has not had a case of either diphtheria or tetanus. However, with our currently reported national immunization levels—particularly in

certain segments of our population, it will not be at all surprising to see continued outbreaks of diphtheria and tetanus as well as measles and even polio unless these immunization programs are retained and intensified.

It is also as a result of the Federal Immunization Program that many local health jurisdictions have been able to offer new vaccines to the public as they become available. In 1965 and 1966 when the federal effort to eradicate measles was first launched, we, like most health districts across the country, conducted a mass measles immunization program with vaccine and personnel provided under the Vaccination Assistance Act.

Fig. 2

MEASLES CASES JEFFERSON COUNTY, ALABAMA

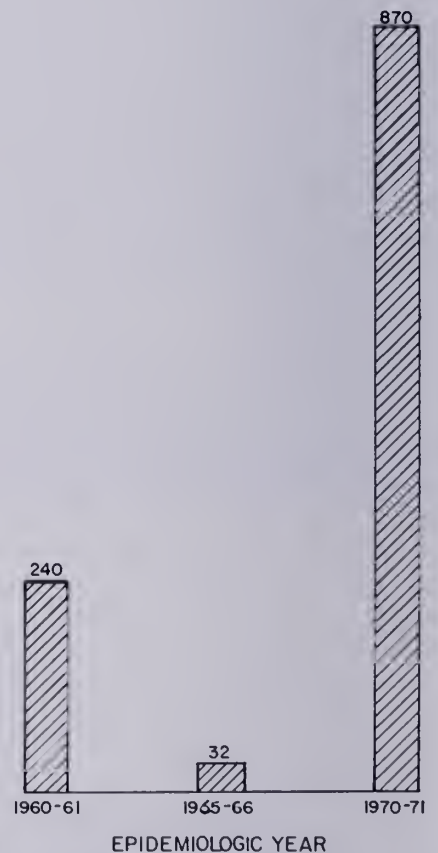


Figure 2 shows our experiences with measles control by depicting reported cases for three selected measles epidemiologic years (defined by the National Center for Disease Control as the 41st week of a given calendar year through the 40th week of the next conse-

cutive calendar year) in the past decade. In 1960-61, we were still in our pre-vaccine era and experiencing measles outbreaks every two to three years which, prior to widespread vaccine use, was the typical urban pattern. The next period shown, 1965-66, was shortly after measles vaccine had been introduced in county-wide programs. In a subsequent year, not shown on this graph, we actually reached a level of zero (0) reported cases.

Then, in 1968, the Federal Vaccination Assistance Act expired. After "carry over" funds were expended in 1969, there was no further direct funding for measles immunization activities. Since 1970, there has been a small release of additional funds for measles vaccine, but such unpredictable fiscal action does not promote sustained activity or careful planning. Furthermore, the lack of continuity of funding for all vaccines has made immunization practice subject to fads. It was no coincidence that money for measles immunization waned when a new vaccine against Rubella was introduced. In short, the measles eradication program was eradicated before the disease.

What this meant for Jefferson County was the epidemic resurgence of a totally preventable illness (again depicted in Figure 2) and, the tragic loss of life of two of our young American citizens. And this, solely because a real commitment to a proved preventive measure had not been sustained.

Please do not misconstrue my comments as being opposed to our current Rubella immunization activities, but rather to indicate that a total, continuing, comprehensive immunization program must be funded and maintained. I do feel that the dollar amounts included in H. R. 14455 are appropriate.

Tuberculosis

Tuberculosis control is the final area I would comment upon today. Tuberculosis case rates have undergone dramatic reduction in Jefferson County during the past decade. However, even with a nearly 50 per cent reduction in new active case rates dur-

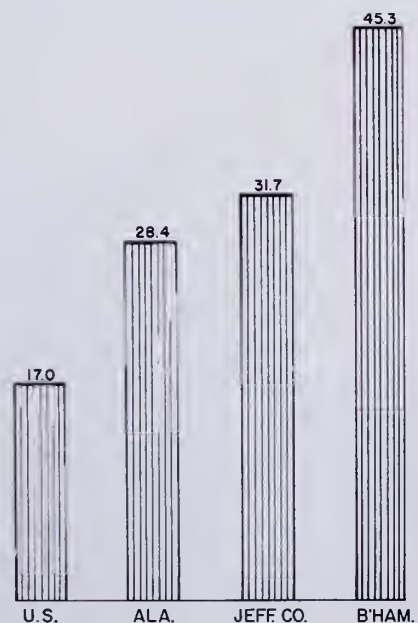
ing that ten year period, tuberculosis remains a major public health problem.

As is true in many local health jurisdictions, our department has primary responsibility for tuberculosis control activities. The program includes identification and epidemiologic follow-up of cases, disease surveillance monitoring, and direct patient supervision in a series of free standing clinics necessitating the skills of a multi-disciplinary staff, laboratory and radiologic support services, and prescription drugs. In 1970, we had nearly 25,000 tuberculosis clinic visits, and, as is so often true, the majority of our new cases occurred in the lower socio-economic segment of our population—i.e. that segment of the population with the least access to medical care.

As you know, specific categorical program support for tuberculosis control was reduced in 1968 and essentially eliminated in 1969. At that time, Birmingham, ranking 48th in the nation in population, ranked 26th in the nation in the actual number of new active cases reported, and fourth in the nation in new active case rates. As you can see in Figure 3, the new active case rate for the

Fig. 3

TUBERCULOSIS
1971 NEW ACTIVE CASE RATES PER 100,000 POPULATION



City of Birmingham in 1971 was still nearly three times the national average.

This, then, is the status of a program for which federal funds were withdrawn and withdrawn at a time when real gains were being made. With the termination of categorical funding, our state lost a total of \$800,000 in tuberculosis control money, (\$500,000 from a state-wide grant, and \$300,000 from a Jefferson County grant) while at the same time receiving an increase of only \$422,000 in its "block funding" under 314 (d). Of that amount, the State chose to allocate only \$250,000 for tuberculosis control state-wide—including Birmingham.

Every state in the southeastern region—save one—lost much needed tuberculosis assistance as a result of this shift in funding; the areas which suffered most were areas such as Alabama where the prevalence of tuberculosis is greatest. In the past, categorical grant awards have been made on the basis of population and *need*; block grant distribution, on the other hand, simply has not met tuberculosis needs in those areas of the United States which the National Center for Disease Control reports having the highest incidence of new active tuberculosis cases. It somehow makes very little sense to me to "reallocate" communicable disease control funds merely for the sake of philosophical change—i.e. categorical to block funding—when such reallocation removes health dollars from areas where the problems are most severe.

Gentlemen, I would emphasize again that while our case rates are high, our experience in tuberculosis control is not unique. It will be a few years before the full effect of the withdrawal of this categorical program is felt (because of the natural history of the disease itself), but if it is not now reinstated, in time we will see developing a picture very much like that of the explosive reappearance of syphilis in 1957, and the unprecedented resurgence of measles in 1969 following the withdrawal of previous federal commitments. When the extent of this funding error is finally recognized and the program, of

necessity, is reinstated, it will be at a higher fiscal level than is currently necessary, and with a loss of all that has been gained to this point in time. I do hope we will learn from our lessons of the past and not eliminate programs when a job is still to be done.

The amounts requested for tuberculosis control in H. R. 14455 are not sufficient. I would encourage your consideration of an increased authorization by at least 50 per cent in this area.

Summary

In conclusion, I would note that the themes I have tried to develop today are:

- (1) that communicable diseases are unique—they affect not just an individual, but the public at large, and, as such, need special, categorical attention and, yes, categorical support;
- (2) that the experiences of our Health Department are in no way unique, that they in all likelihood closely parallel those of health departments providing service to the very constituencies which each of you represent;
- (3) that we must cease "program eradication" and "fad funding" each time a goal appears in sight; and,
- (4) that only with a long term federal commitment to the control of these diseases, which recognize no local or state boundary, can we hope to achieve the results which we all desire.

Gentlemen, I urge you to act swiftly and positively on the bill under consideration. Again, I thank you for the opportunity to be here today.

We can put our children on wheels to see the world, but we cannot give them the kind of home that any town provided in the nineties, not at any price —Henry Seidel Canby.

We are under a Constitution, but the Constitution is what the judges say it is.

—Charles Evans Hughes (in 1907).

The American Doctor is under attack. What are we going to do about it?

You're concerned about the attacks. The AMA is just as concerned. But what are we doing about them? Some things we can't do. Some things we can do. And are doing.

We can't control the media. Its freedom is a constitutional guarantee. In one respect, newsmen are very much like doctors. They resent intrusions in their area of responsibility.

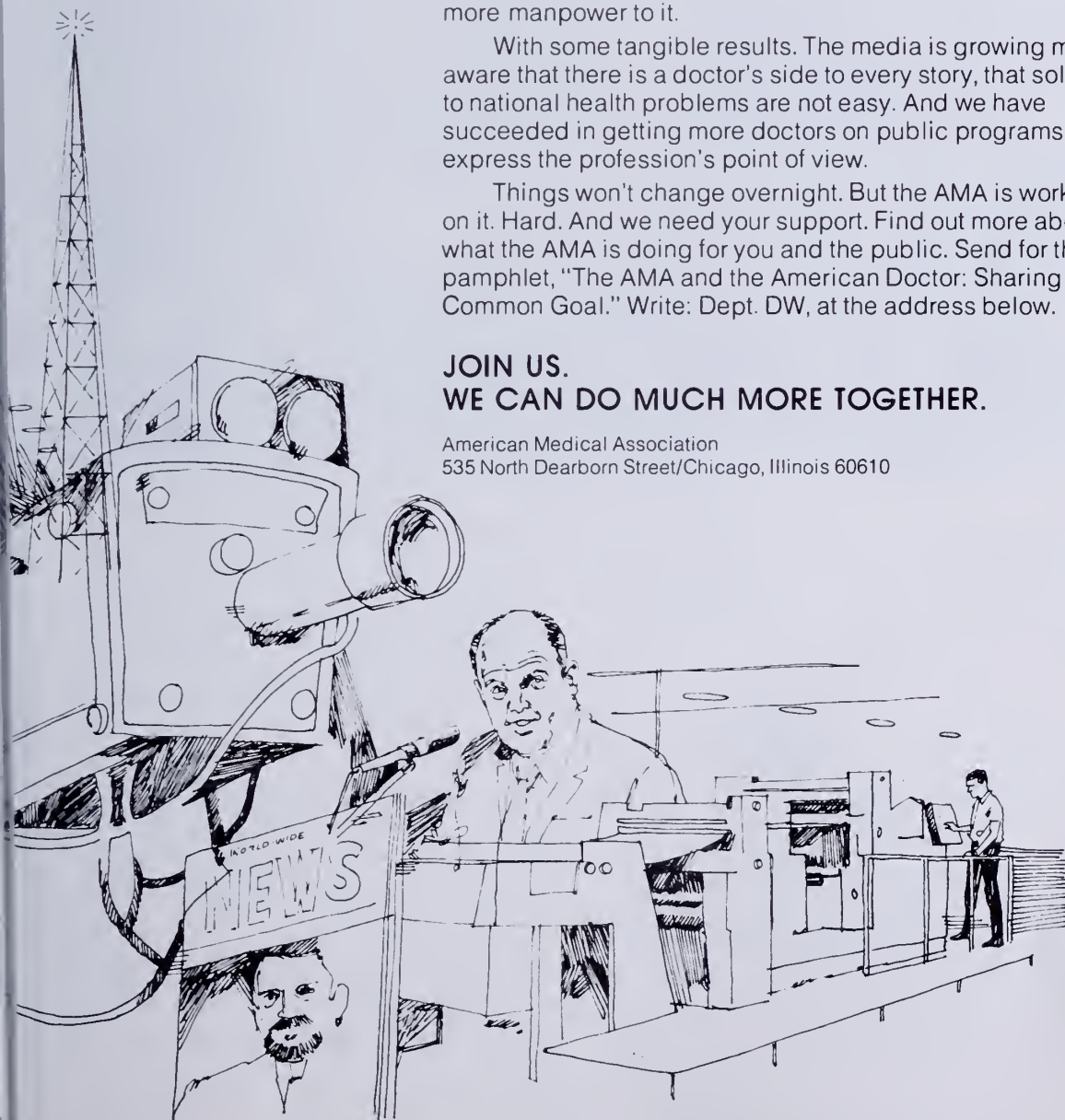
But the AMA is working hard to influence the media to follow a policy of greater fairness and objectivity in its reporting. Overcoming reporters' basic assumptions is a long term educational job. And the AMA is devoting more money and more manpower to it.

With some tangible results. The media is growing more aware that there is a doctor's side to every story, that solutions to national health problems are not easy. And we have succeeded in getting more doctors on public programs to express the profession's point of view.

Things won't change overnight. But the AMA is working on it. Hard. And we need your support. Find out more about what the AMA is doing for you and the public. Send for the pamphlet, "The AMA and the American Doctor: Sharing a Common Goal." Write: Dept. DW, at the address below.

**JOIN US.
WE CAN DO MUCH MORE TOGETHER.**

American Medical Association
535 North Dearborn Street/Chicago, Illinois 60610



Hobbies To Fill A Doctor's Leisure

No man is really happy or safe without a hobby, and it makes precious little difference what the outside interest may be—botany, beetles or butterflies, roses, tulips or irises; fishing, mountaineering or antiquities—anything will do so long as he straddles a hobby and rides it hard.

—Sir William Osler, 1909



The Rayfields With Some Of Their Restored Clocks

An Alabama doctor who has plenty of time on his hands must be unique in medical history.

There is such a doctor, you know.

John Dexter Rayfield was born in Coosa County, in the town of Weogufka, on 6 June 1909, the son of a farmer. From Weogufka High School he went to Auburn for his pre-med work, and then to the Medical College of the University of Tennessee, in Memphis, from which he received his M. D. degree in 1937.

When he was still a sophomore in medi-

cine, the future Dr. John D. Rayfield was married to Lee Etta Cannon, a native of Savannah, Tennessee, a graduate nurse in the Baptist Hospital, Memphis. And but for Mrs. Rayfield, the Doctor's commitment to time might never have been publicized here.

Dr. Rayfield practiced medicine in Jacksonville, Ala., for a score of years before moving over into the Public Health field. Meantime, his father had died, and in liquidating the estate, the physician-son obtained 40 prime acres from the old farm place. He built a snug little "cabin," fenced the property, and established a modest sheep ranch.

It provides a retreat from the world—when he has the time for it!

One rainy night years ago, caught in his cabin with nothing to read, Dr. Rayfield decided to take apart an ancient clock and see "what made it tick"—or, rather, why it no longer ticked. Its years of usefulness had long since passed.

But the clock hid its secret well. Even after the last screw had been removed, the last two components separated, the interested doctor seemed no nearer a solution than before.

Many a curious youngster has taken a clock to pieces and, like Humpty-Dumpty after his fall, found no way to put it together again. But Dr. Rayfield was no immature dabbler in mechanical mysteries. He packaged the pieces carefully and took them home with him. A month later the dented, battered timepiece was ticking away as merrily as when it was new. The good doctor was "hooked"—but good!

A clock, declaims "The Devil's Dictionary," is "a machine of great moral value to man, allaying his concern for the future by reminding him what a lot of time remains to him."

Of course, in the beginning, there was not so much time around the Rayfield household. But as the hobby gathered steam, as one silent relic after another was restored to life in the workshop of the resourceful M. D., there was gathering din. The cacophony of ticks and clicks was punctuated every hour on the hour by a deafening discord of dings and dong.

It doesn't happen any more. The Rayfields solved the noise problem simply by refraining from winding some and stopping the pendulum of others. Sound has been reduced by several decibels. Today each clock must await its turn to run.

The hobby has been expanded outside the timekeeper field, in at least one instance. Someone found an ancient music box that

hadn't voiced a sound for years. Today it tinkles its pleasant melody as happily as when it was young.

Appropriately, the surgical instruments used through his twenty years of private practice are serving Dr. Rayfield well in his hobby of restoring, refining and refinishing the more than 63 clocks now in their home—one for every year of his life, and more.

—W. J. Mahoney, Jr.

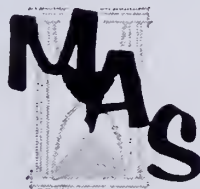
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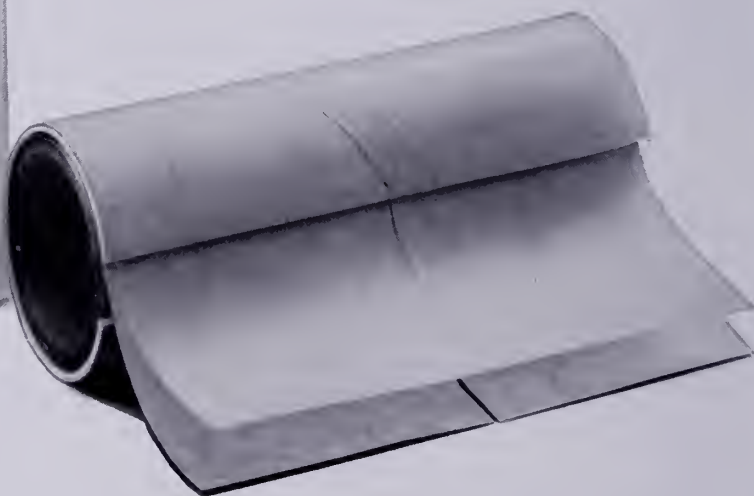
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The Treatment Of Common Dermatoses With Topically Applied 0.05 Per Cent Desonide Cream

A Paired-Comparison Clinical Study

Paul G. Reque, M. D.

Birmingham, Alabama

For the past 20 years, because of the introduction of corticosteroids, the practice of dermatology has been dramatically changed. During this time period steroid drugs have won widespread acceptance both for systemic and topical usage. As a result there has been a continuing search for more active steroid compounds with fewer side effects.

To demonstrate how formidable is medical acceptance of steroids, the following table illustrates their estimated total sales:

YEAR	TOTAL SALES OF STEROID PRODUCTS
1960	94,332,000
1965	104,252,000
1970	133,933,000

This increase is largely due (60%) to the use enjoyed by the topical preparations and in particular by the topical creams. At the same time there has been a tendency to reduce oral medication with steroids, probably due to the physicians' concern with peptic ulcer and other complaints and, of course, the cushingoid tendency which often occurs.

The use of occlusive dressing techniques

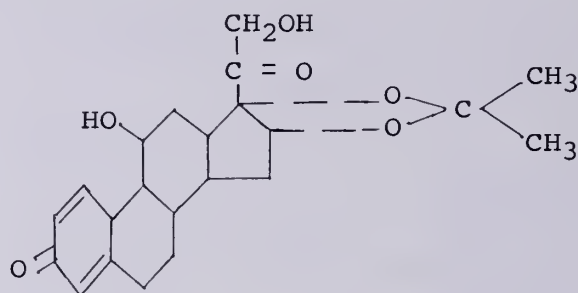
Dr. Reque is Assoc. Prof. Derm; Univ. of Alabama School of Medicine; Director, Dept. Derm; Lloyd Noland Hospital, Fairfield, Alabama.

has enhanced the local anti-inflammatory effects of most topically used compounds of this class but with them, and the development of more active compounds such as the fluorinated steroids, it has become evident that prolonged usage was attended by systemic absorption to the degree that sodium retention,^{1, 2, 3, 4} striae, and cushingoid symptoms were sometimes marked. This is particularly evident when extensive areas of the body have been treated either with or without occlusive dressings.

It has recently been reported by Kukita⁵ of Japan that ¹⁴C labeled fluocinolone remained demonstrable in the skin three days after a single 12-hour occlusive dressing, and Vickers⁶ had previously shown persistence in the keratin layer of a reservoir of the active steroid ingredients in topically applied creams for from three through 15 days. It has also been noted that less medicament was required for treatment of a given body area when the most active steroid compounds were used, and that the improvement usually was more rapid in skin conditions responding favorably to these compounds. This suggests that less medicament over a shorter period of time might be needed to achieve an equally satisfactory result.

Recently, a non-fluorinated steroid com-

pound, desonide,* has been synthesized. Its chemical structure is as follows:



and it is known chemically as 16 α -(hydroxy-prednisolone-16, 17-acetonide.

Despite the fact that it is non-fluorinated, desonide* has been demonstrated to possess the same anti-inflammatory activities as the most potent fluorinated steroids of its class in various animal models.⁷ These findings have been confirmed in clinical pharmacology experiments.⁷

MATERIALS AND METHODS

The object of this study was to provide information about how effective desonide was as compared to a known very active fluorinated steroid cream at twice the concentration. This study compared the effects of desonide* cream, 0.05 per cent concentration, with betamethasone valerate cream, 0.1 per cent. The patients had bilateral diseases of the skin. All supplies were provided with coded labeling so that neither the evaluator nor the patient knew which medication was being used on either side. The tubes were color-coded so that in random fashion half of the patient population was treated on a given side with either of the comparative agents.

With few exceptions open applications were employed with no special instructions to rub in, but generally patients were advised to "cream" the affected areas and to allow time for absorption. The duration of treatment ranged from one through three weeks. Since various animal and human toxicity studies had been reported, laboratory studies were routine and only re-

quested when the disease to be treated warranted it, or side effects suggested it.

CLINICAL SUBJECTS

The protocol for the study required that only patients with bilateral skin diseases which are known to be responsive to standard topically applied steroid preparations could be included. Therefore, the list of conditions treated was not extensive and are illustrated in Table I.

TABLE I
Skin Conditions Treated

Disease	Number of Patients
Eczematous Conditions	28
Eczema	9
Nummular Eczema	6
Dyshidrosis	4
Neurodermatitis	4
Infectious Eczema	3
Lichen Planus	1
Lichen Simplex Chronicus	1
Dermatitides	16
Contact Dermatitis	4
Stasis Dermatitis	4
Allergic Contact Dermatitis	3
Atopic Eczema	2
Dermatitis Repens	1
Erythema Palmaris	1
Allergic Vasculitis	1
Psoriasis	6

RESULTS

A total of 50 patients participated in this trial. Table II summarizes the effectiveness of desonide* 0.05 per cent cream as compared to betamethasone valerate 0.1 per cent cream. It is evident that equivalent results were obtained from both treatments despite the fact that the concentration of desonide* cream was only half that of betamethasone valerate cream, which in all probability implies greater anti-inflammatory activity of desonide.*

TABLE II

Overall Results of Treatment

	Excellent	Good	Fair	Poor
Eczematous Conditions				
Desonide*	24	3	0	1
Betamethasone				
Valerate	26	1	0	1
Dermatitides				
Desonide*	11	4	0	1
Betamethasone				
Valerate	11	1	3	1
Psoriasis				
Desonide*	4	1	1	0
Betamethasone				
Valerate	3	1	2	0
Totals				
Desonide*	39	8	1	2
Betamethasone				
Valerate	40	3	5	2

SUMMARY AND CONCLUSIONS

In conclusion it may be stated that the persistent search for more topically-active steroid compounds continues to bear fruit. It remains to be seen whether prolonged and extensive use of the more active steroids, even in lower concentration, will result in fewer systemic effects. This paired-comparison, double-blind clinical study demonstrates the equal effectiveness of desonide* cream

Marrying a woman because you happen to be in love with her is about as logical a proceeding as throwing the cat out of the window because the rhododendrons are in bloom.

—Branch Cabell.

Every kind of peaceful cooperation among men is primarily based on mutual trust and only secondarily on institutions such as courts of justice and police.

—Albert Einstein.

0.05 per cent when compared with twice the strength of betamethasone valerate (0.1 per cent) in a similar cream vehicle.

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*Commercially available as .05 per cent Tridesilon cream.

Appreciation is expressed for the clinical and technical assistance of Dr. Robert O. Lauderdale, M. D., Birmingham, Alabama and Dr. J. R. Migliardi, M. D., West Haven, Connecticut as well as the clinical supplies furnished by the Division of Clinical Research, Miles Laboratories, Inc. Elkhart, Indiana.

Let us endeavor so to live that when we come to die even the undertaker will be sorry.—Mark Twain

Only a man's motives and mission make him great.—Forbes Epigrams

There are very few things in the world which it is worthwhile to get angry about, and they are just the things that anger will not improve.—Henry Jarvis Raymond

What No One Knows, Though Everyone Should, About IPPB Machines

PART IV--MONAGHAN

D. S. Tysinger, Jr. M. D.

Dothan, Alabama

In part I-III, Bennett, Retec, and Bird IPPB machines have been presented. In these machines either Leak A or Leak B has been a controllable flow leak. In the Bennett between Leak A and B pressures were set and this was a low pressure area. In the Retec pressures were higher but not line pressure. In the Bird, line pressure existed from wall to nebulizer and venturi.

The Monaghan principle differs from the previous three. Leak A in the Monaghan is a fixed leak at the wall outlet. The flow beyond the connector and bronzed filter is fixed. Leak B is fixed and is a toggle valve that allows flow or no flow. Thus Leak A and B are both fixed. Here as with the Bird, pressure is controlled beyond these two leaks and is controlled separately from line flow. This machine differs from the Bird however, in that the venturi jet flow is also fixed. There is no flow rate control. This makes this machine a fixed flow rate machine *primary flow wise* (venturi jet and nebulizer flow).

Machines available for study were the M505 and M515. A model M520 was not available but the Monaghan Company supplied information concerning the differences. These were not in the area of valve function rather in the area of 1) automatic cycling 2) sensitivity control 3) 100 per cent oxygen delivery mechanics and 4) routes of nebulization and humidification.

The Monaghan principle has one other feature, in looking at the M505 it can be run on compressor or line oxygen effectively. This model is inspiratory only flow. Everything

shuts off during expiration. The M515 is compressor driven and nebulizes during inspiration and expiration. (It can be driven by putting the 505 inlet on it by wall oxygen and operates equally well.)

For an understanding of principles of operation the M505 on wall oxygen will be discussed first. Its principles apply to all models. Line pressure at 50 PSI and 130L/min flow pass through the inlet and bronze filter. (Leak A Figure No. 15) From this point there is a tube to a toggle valve Leak B. The flow through this tube is 30L/min at 41 PSI when toggle valve is open. When the toggle valve is closed there is no flow and 50 PSI. Thus there is a 9 PSI pressure drop across Leak A with 30L/min, flow when Leak B is open. The toggle valve is controlled by a push rod from patient chamber into the switching chamber. (Figure No. 15)

When the toggle valve is opened up then flow begins into the switching chamber. Pressure drop across the toggle valve is from 41 to 21 PSI with 30L/min flow. From the switching chamber flow goes to the nebulizer which is controlled by a needle valve. When this is full open the nebulizer flow is 9L/min at 21 PSI.

The other portion of flow is the venturi jet flow which is 21L/min at 21 PSI. The venturi flow opens into the positive pressure build up area of the *on-off valve*. In the venturi throat is a damper (stove-pipe type) when this is open then venturi intrainment is 75L/min. However, when this is closed putting back pressure on the venturi then venturi intrainment is cut to 9L/min. Thus

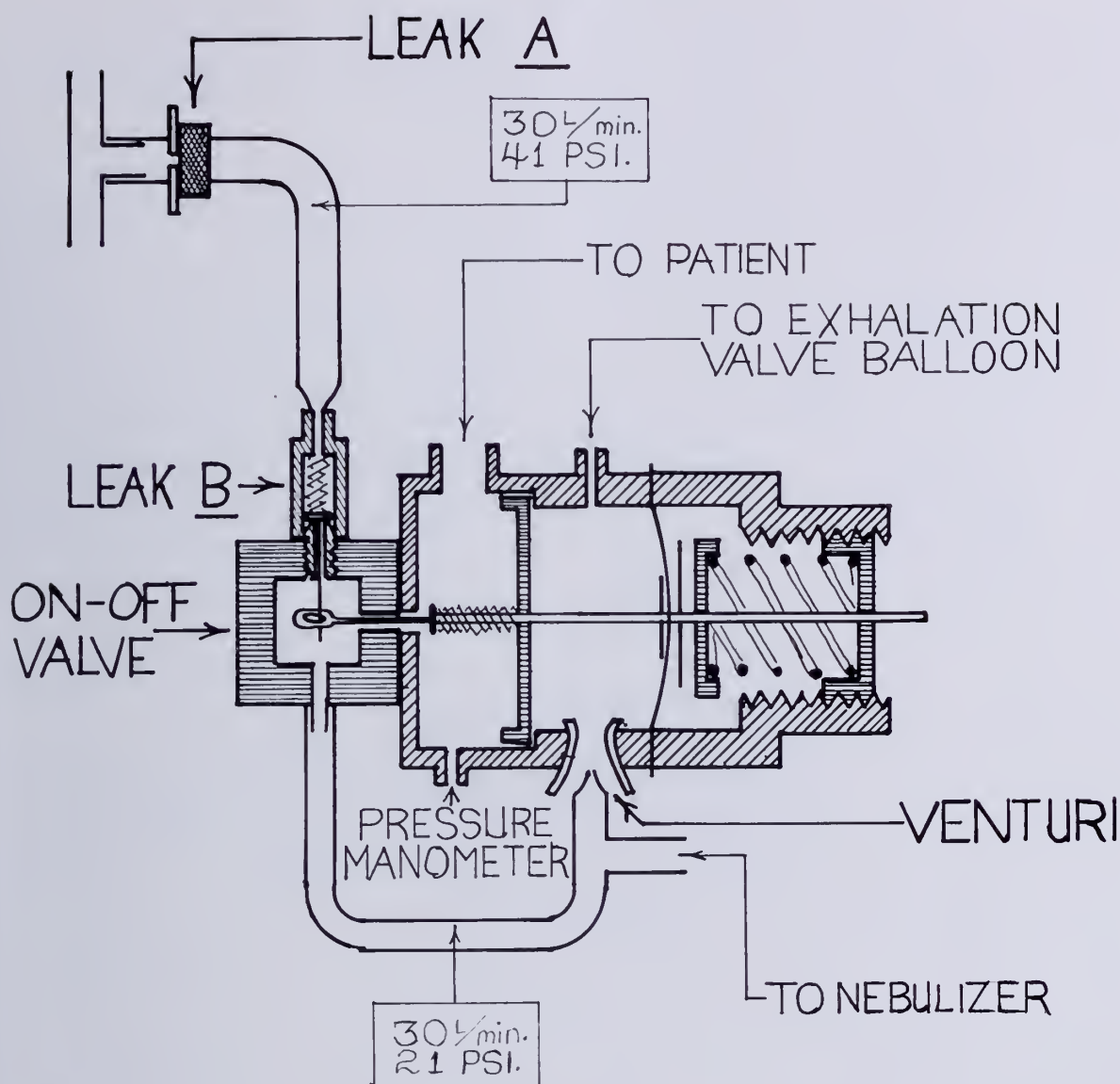


FIGURE 15

total venturi jet and intrainment flow set on maximum is 96L/min. When flow is set on minimum, venturi intrainment is cut down and total flow is reduced to 30L/min. (Table #9) The primary flow (Nebulizer and venturi jet flow) that builds pressure and causes machine recycling is thus 21 and 9 or 30L/min. Since this machine is being run on wall oxygen (nebulizer and venturi jet) and the venturi jet is mixing with room air, venturi back pressure will increase oxygen per cent concentrations. When set on *maximum* flow oxygen concentration no back pressure was 42 per cent. When set on *minimum* flow which reduces venturi in-

trainment oxygen concentrations rise to 76 per cent.

The on-off valve is a spring loaded valve (Figure # 15) The venturi fits into the side of the positive pressure chamber. This is behind the actuator disc. The actuator disc divides the positive pressure chamber into patient side and diaphragm side. A spring loaded rod fits through the center of the actuator disc and back through the diaphragm and out the handle. Opposite the actuator disc on the wall of the patient side positive pressure chamber is the push rod of the switching chamber that turns the toggle switch on. The diaphragm is spring

loaded and by adjusting the pressure of the recycling spring, pressure setting is controlled. When the patient breathes in he causes the actuator disc to move forward. As the actuator disc is moved forward the push rod is pushed in turning on the toggle switch on. Flow starts, and the flow through the venturi pushes on the back side of the actuator disc pushing it and keeping it full on. Pressure builds up the push against the rubber diaphragm. Pressure continues to build and as spring setting pressure is overcome the diaphragm moves back pulling the actuator disc closed and releasing the pressure on the toggle valve push rod. This shuts off the flow and expiration proceeds.

The compression area of this machine (positive pressure chamber, tubing, nebulizer and mouthpiece) is 400 cc. The 30L/min primary flow builds up pressures here. If this machine is held on after a normal inspiration then pressure rapidly rises to 30 cmH₂O and the machine (due to the spring loading setup of the push rod) flutters back and forth at a slow rate. Pressures fluctuate between 15-30cmH₂O pressure. With the machine set at maximum pressure (40cmH₂O) the machine flutters rapidly. This is due to the rapid build up of pressure in this small volume area. Venturi back flow is one of the major protective features of this valve not building up dangerous pressures. Therefore, obstructive techniques, etc., cannot be done with this machine as effectively as with other equipment. This, can be done to a certain extent if the patient and therapist do not get upset by the fluttering of the valve.

The Exhalation valve is controlled from the positive pressure chamber. It is of the balloon type. This is a low pressure closure and leaks when pressure builds up. The pressure manometer monitors the patient chamber between the actuator disc and the patient flow tube.

The nebulizer nebulizes 0.5 cc/min. fluid. The 30L/min primary flow (which is dry gas) must be humidified and requires 1.32

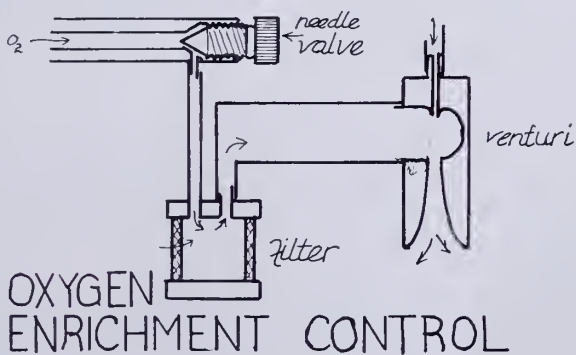
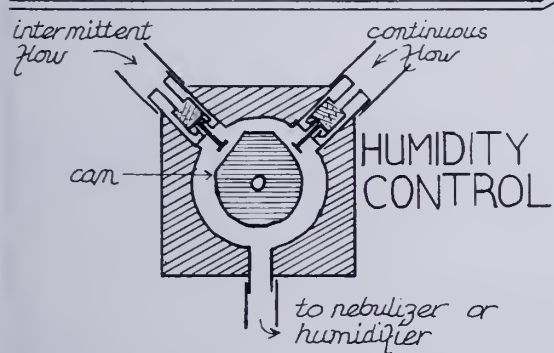
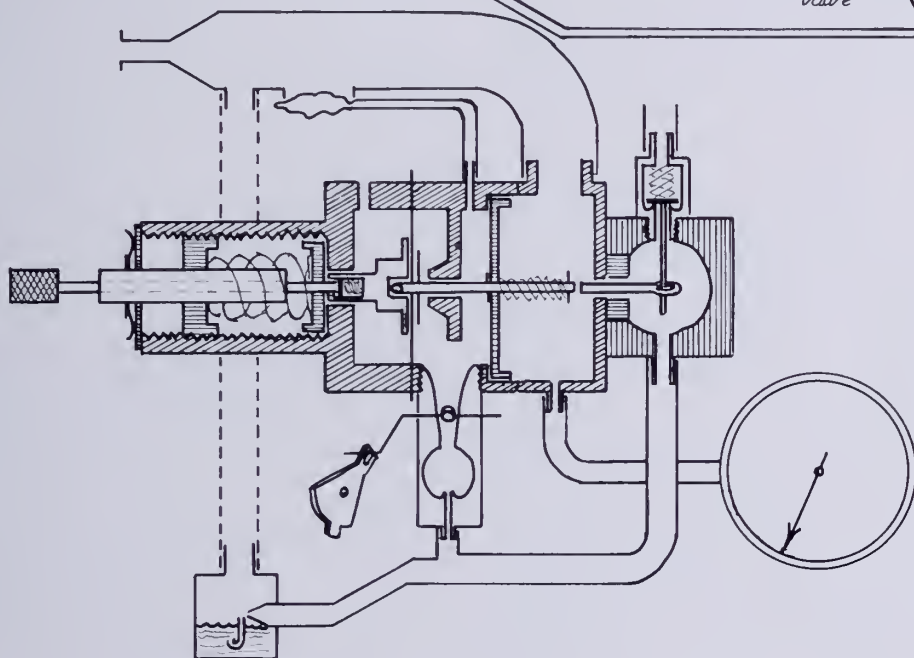
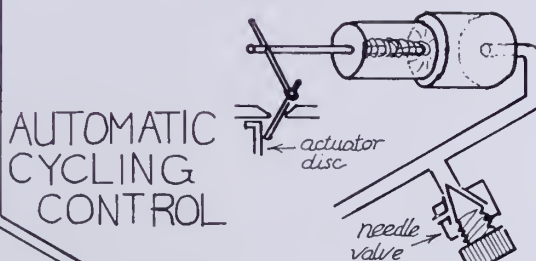
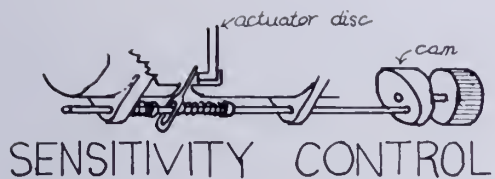
cc/min. (1L air at 37°C requires 0.044 cc of water for 100 per cent humidification at body temperature.) Thus humidity delivery is low.

The patient breathes in, and there is no flow. He is conscious of the negative pressure he must produce to turn the machine on. This is not an aggravating nor uncomfortable sensation to the patient. Then flow starts. Nebulizer flow reaches the patient slightly before main line tube flow. This occurs since the nebulizer is under higher pressure, and thus flow starts quicker. There is only slight high initial flow of particles with the 505, it is much higher with the 515 that has continuous nebulization. When cycling pressure is reached the machine cuts off.

The smallest intubation tube that could be ventilated was a 4mm tube.

The 505 run on a compressor functions essentially the same as on wall oxygen. It is not a good machine for a compressor however, because of strain put on the compressor during the expiratory period of no flow. (The compressor used was a Thomas compressor putting out 50 PSI and 30L/min flow.) See Table #9 for exact figures.

The M520 valve works the same. It has added features. (1) Nebulization is controlled by a cam adjustment and can be intermittent or continuous, or to a humidifier. (See flow diagram #5) (2) Modifications in the switching chamber and needle valve control allow for oxygen enrichment of the venturi intrainment flow and 100 per cent oxygen can be delivered there by (3) A sensitivity control has been added. This is a spring loaded pressure arm against the actuator disc. The spring loading is controlled by a cam. (see the diagram #5). (4) Automatic cycling has been added. This is a spring loaded cartridge, bleeder valve controlled to adjust expiration time before cutting the machine on again. This is accomplished with an arm through the valve body that pushes the actuator disc to the on posi-



FLOW DIAGRAM NO. 5

PART IV—MONAGHAN

TABLE #9

TYPE AND SOURCE	SOURCE PSI	SOURCE L FLOW	MAIN LINE PSI	MAIN LINE L FLOW	JET PSI	JET FLOW	NEB. PSI	NEB. FLOW	POWER FLOW	INT. MAI. FLOW	INT. MIN. FLOW	Total Flow Maximum	Total Flow Minimum	NEB. VOLUME CC/MIN	SMALLEST TUBE VOLUME
M-515 COM-PRESSOR	50	30L/min	30 PSI	30 L/min	21 PSI	20 L/min	21 PSI	9 L/min	30 L/min	7.5 L/min	8 L/min	96	29	0.4	4mm
M-505 COM-PRESSOR	50	30L/min	41 PSI	18 L/min	30 PSI	12 L/min	26 PSI	6 L/min	18 L/min	60 L/min	15 L/min	72	27	0.3	4mm
M-505 OXYGEN	50	130L/min	41 PSI	30 L/min	21 PSI	21 L/min	21 PSI	9 L/min	30 L/min	75 L/min	9 L/min	96	30	0.5	4mm

** ON MAXIMUM 42% OXYGEN
ON MINIMUM 76% OXYGEN

tion as volume bleeds down. The patient can over ride the automatic control. The automatic control can thus be set slightly lower than patient rate and if patient quits breathing the automatic control will take over.

The 515 is a compressor driven machine and is designed as a portable home unit. It will be discussed. The main differences here is in compressor relief during expiration. Other than this the 515 is a continuously nebulizing machine that functions like the 505 on wall oxygen. (see Table #9) The continuous nebulization gives a higher initial particulate delivery during beginning inspiration. The 9L/min nebulizer flow must be overcome in beginning inspiration which neutralizes the patients subjective feelings of producing sufficient subambient pressure to turn the machine on. The 515 is driven by a Thomas compressor. The output is 50 PSI and 30L/min flow. Flow from the compressor goes to a 4-way tube. One line from this tube

goes to the nebulizer needle valve. The second goes to the switching chamber toggle switch. The third goes to a toggle switch (the exhalation toggle switch), that is controlled from the switching valve. When the valve is on it fills a balloon that depresses a spring loaded piston that turns the exhalation toggle switch off. Flow is thus through the switching valve. When the switching valve is off, the spring loaded piston turns the exhalation toggle switch on and compressor flow is through this valve to the outside. Thus the compressor is working against a constant resistance it can be set for and is not stressed during the expiratory phase of breathing. This machine works the same as the 505 on compressor or wall oxygen (See Table #9) Thus it has already been discussed.

In the next few issues to be discussed will be the home units Bennett, Retec., and Bird, and the Bird Asthma stick and Ohio Handy Vent.

See Figure No. 13 and 14 Page 37

See Flow Diagram No. 4—Page 38

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Indications: For the treatment of trichomoniasis in both male and female patients and the sexual partners of patients with a recurrence of the infection provided trichomonads have been demonstrated by wet smear or culture. The oral form is indicated also for intestinal amebiasis and amebic liver abscess.

Contraindications: Evidence or history of blood dyscrasia, active organic disease of the CNS, the first trimester of pregnancy and a history of hypersensitivity to metronidazole.

Warnings: Use with discretion during the second and third trimesters of pregnancy and restrict to those pregnant patients not cured by topical measures. Flagyl (metronidazole) is secreted in the breast milk of nursing mothers. It is not known whether this can be injurious to the newborn.

Precautions: Mild leukopenia has been reported during Flagyl use; total and differential leukocyte counts are recommended before and after treatment with the drug, especially if a second course is necessary. Avoid alcoholic beverages during Flagyl therapy because abdominal cramps, vomiting and flushing may occur. Discontinue Flagyl promptly if abnormal neurologic signs occur. Exacerbation of moniliasis may occur. In amebic liver abscess, aspirate pus during metronidazole therapy.

Adverse Reactions: Nausea, headache, anorexia, vomiting, diarrhea, epigastric distress, abdominal cramping, consti-

pation, a metallic, sharp and unpleasant taste, furry or sore tongue, glossitis and stomatitis possibly associated with a sudden overgrowth of *Monilia*, exacerbation of vaginal moniliasis, an occasional reversible moderate leukopenia, dizziness, vertigo, incoordination and ataxia, numbness or paresthesia of an extremity, fleeting joint pains, confusion, irritability, depression, insomnia, mild erythematous eruptions, "weakness," urticaria, flushing, dryness of the mouth, vagina or vulva, pruritus, dysuria, cystitis, a sense of pelvic pressure, dyspareunia, fever, polyuria, incontinence, decrease of libido, nasal congestion, proctitis, pyuria and darkened urine have occurred in patients receiving the drug. Patients receiving Flagyl may experience abdominal distress, nausea, vomiting or headache if alcoholic beverages are consumed. The taste of alcoholic beverages may also be modified. Flattening of the T wave may be seen in EKG tracings.

Dosage and Administration

For Trichomoniasis. In the Female: One 250-mg. tablet orally three times daily for ten days. Courses may be repeated if required in especially stubborn cases; in such patients an interval of four to six weeks between courses and total and differential leukocyte counts before, during, and after treatment are recommended. Vaginal inserts of 500 mg. are available for use, particularly in stubborn cases. *When the vaginal inserts are used, one 500-mg. insert is*

placed high in the vaginal vault each day for ten days and the oral dosage is reduced to two 250-mg. tablets daily during the ten-day course of treatment. Do not use the vaginal inserts as the sole form of therapy. **In the Male:** Prescribe Flagyl only when trichomonads are demonstrated in the urogenital tract, one 250-mg. tablet two times daily for ten days. Flagyl should be taken by both partners over the same ten-day period when it is prescribed for the male in conjunction with the treatment of his female partner.

For Amebiasis. Adults: For acute intestinal amebiasis, 750 mg. orally three times daily for 5 to 10 days. For amebic liver abscess, 500 to 750 mg. orally three times daily for 5 to 10 days.

Children: 35 to 50 mg./kg. of body weight/24 hours, divided into three doses, orally for ten days.

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Contraindications: Pre-existing elevated serum potassium. Hypersensitivity to either component. Continued use in progressive renal or hepatic dysfunction or developing hyperkalemia.

Warnings: Do not use dietary potassium supplements or potassium salts unless hypokalemia develops or dietary potassium intake is markedly impaired. Enteric-coated potassium salts may cause small bowel stenosis with or without ulceration. Hyperkalemia (>5.4 mEq/L) has been reported in 4% of patients under 60 years, in 12% of patients over 60 years, and in less than 8% of patients overall. Rarely, cases have been associated with cardiac irregularities. Accordingly, check serum potassium during therapy, particularly in patients with suspected or confirmed renal insufficiency (e.g., elderly or diabetics). If hyperkalemia develops, substitute a thiazide alone. If spironolactone is used concomitantly with 'Dyazide', check serum potassium frequently — both can cause potassium retention and sometimes hyperkalemia. Two deaths have been reported in patients on such combined therapy (in one, recommended dosage was exceeded; in the other, serum electrolytes were not properly monitored). Observe patients on 'Dyazide' regularly for possible blood dyscrasias, liver damage or other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium (triamterene, SK&F). Rarely, leukopenia, thrombocytopenia, agranulocytosis,

and aplastic anemia have been reported with the thiazides. Watch for signs of impending coma in acutely ill cirrhotics. Thiazides are reported to cross the placental barrier and appear in breast milk. This may result in fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly other adverse reactions that have occurred in the adult. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

Precautions: Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in postsympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting (may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Rarely, necrotizing vasculitis, paresthesias, icterus, pancreatitis, and xanthopsia have occurred with thiazides alone.

Supplied: Bottles of 100 capsules.

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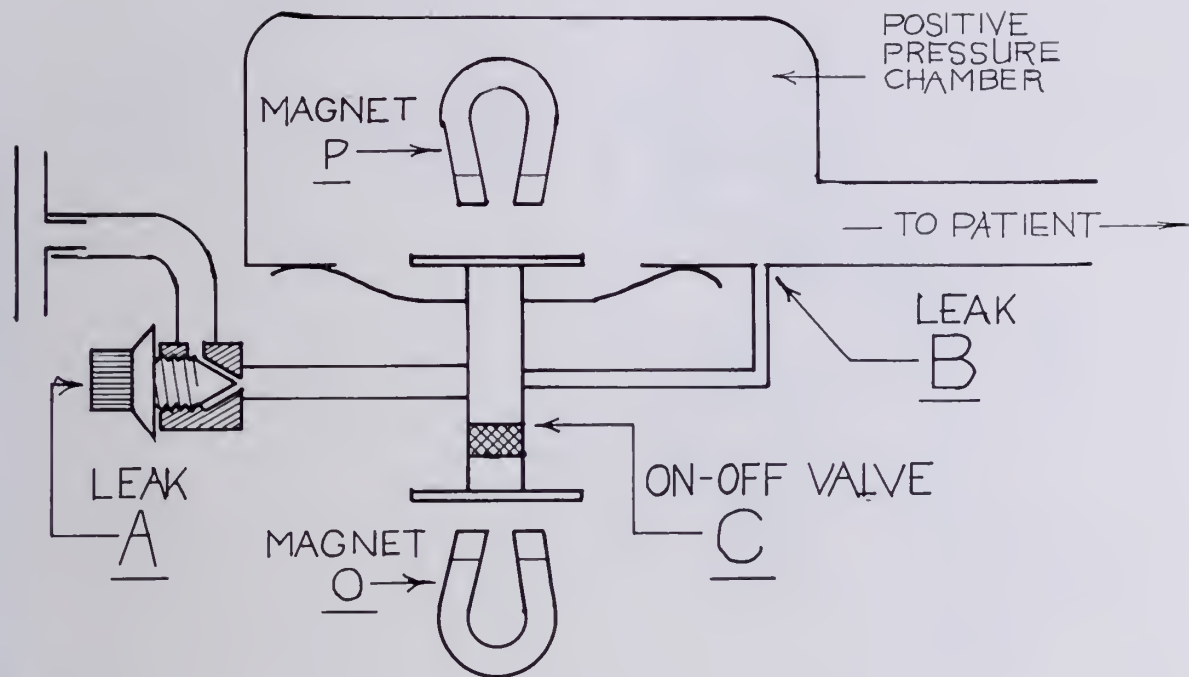


Figure 13

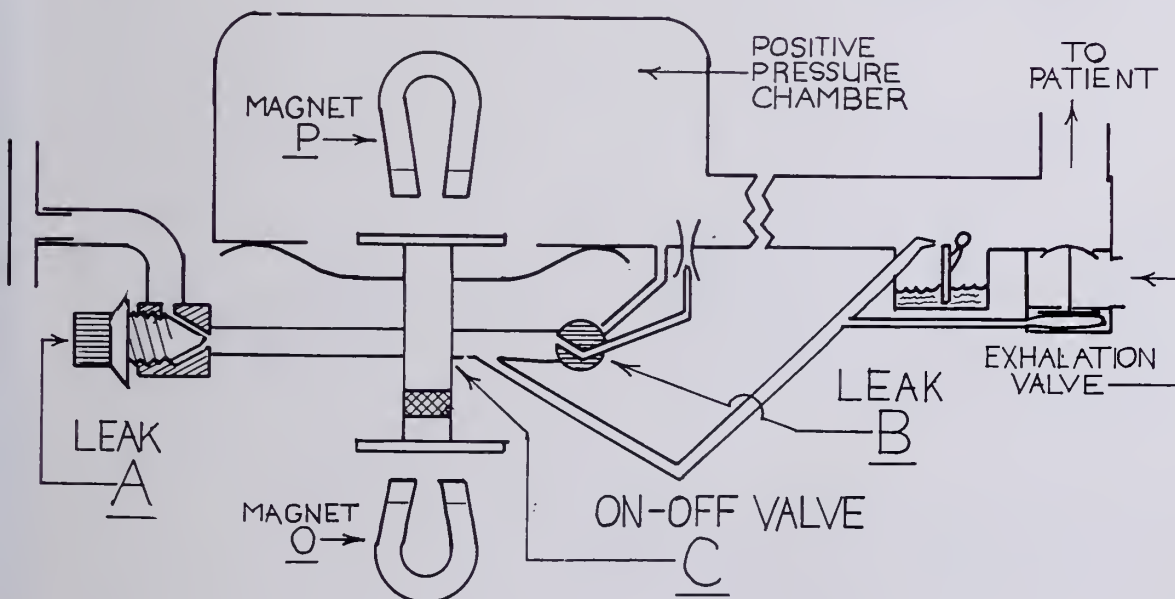
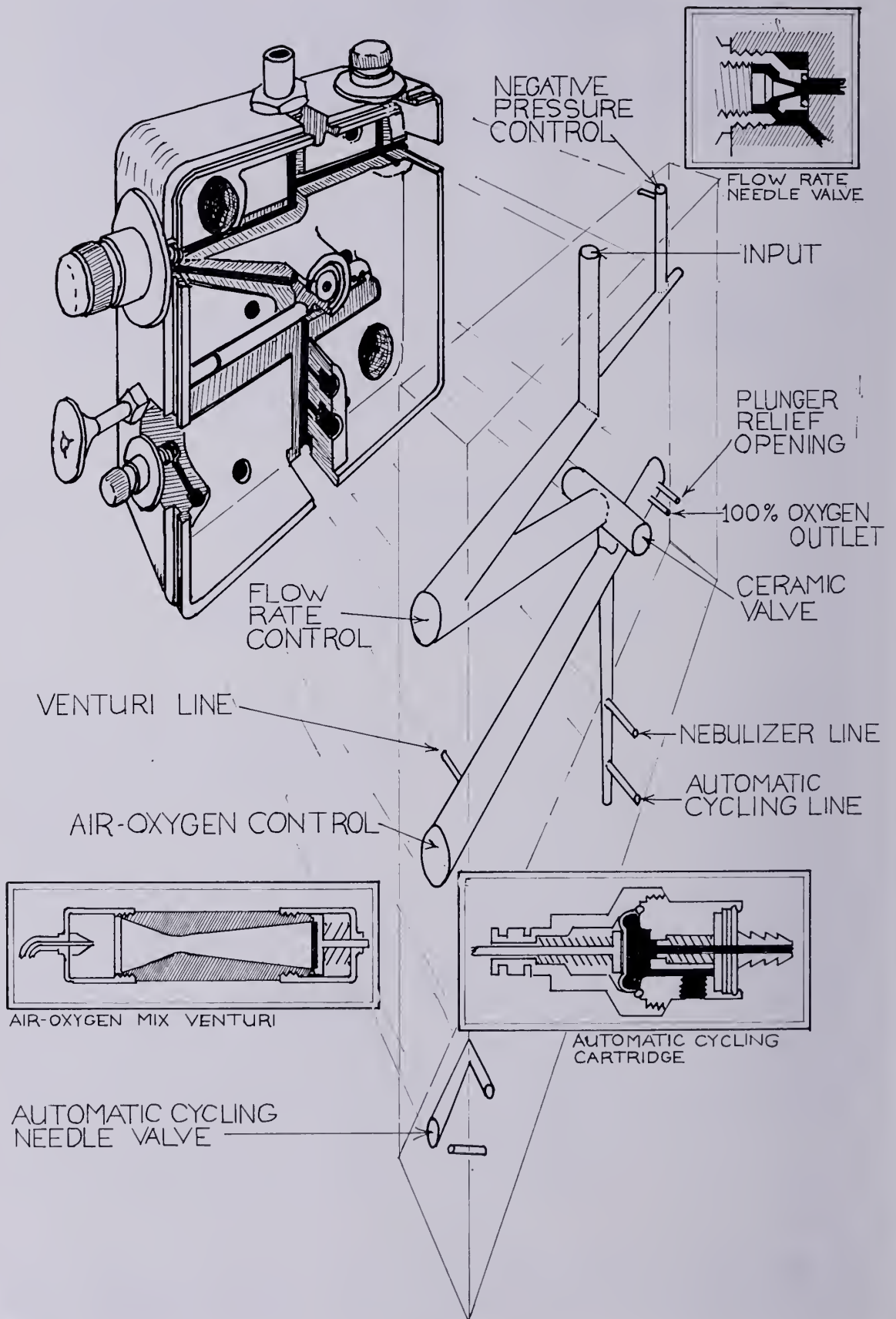
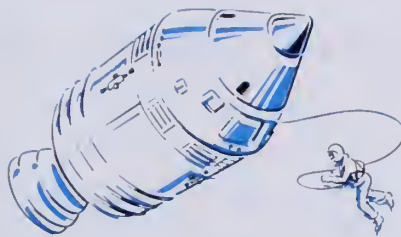


Figure 14



Flow Diagram #4



Man in space, now fait accompli, re-emphasizes the importance of Uro-Phosphate therapy. Research into the effect of space travel on the astronaut reveals that weightlessness causes loss of bone calcium. As the bones are required to bear less and less of the weight of the body they lose calcium, increasing the calcium content of the urine. When physical activity is reduced, the acidity of the urine should be adjusted to keep increased calcium in solution . . . a prophylaxis to prevent kidney or bladder calculi.

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Fathers and Sons in Medicine

Death Terminates A Happy Partnership

On Monday, 31 January 1972, a father-and-son partnership that extended beyond general practice into the same specialty, and even into the same hobby, was terminated.

"We have been on many hunts together and enjoy practicing together," the father noted at the end of his biographical sketch, sent in late last year.

The father, Dr. James Hayes Williams of Birmingham, died on the last day of January, this year.

The senior Dr. Williams was born at Mount Hope, Alabama, on Tuesday, 24 February 1908, the son of Katie (Martin) and James Monroe Williams. He obtained his baccalaureate degree from Maryville College in Tennessee in the year of the market collapse, 1929, and his M. D. degree from Rush Medical School, Chicago, eight years later.

In his junior year at Rush, the then 27-year-old Hayes Williams was married to Mary Jean Taylor, and three children were born to them:—James Richard Williams, destined to follow his father into medicine; Hayes Taylor Williams; and Mary Jean Williams.

Beginning with a rotating internship in 1936, Dr. Williams would spend the next nine years with Lloyd Noland Hospital, the latter four years as chief of obstetrics and gynecology. In 1945 he became assistant professor of OB-GYN at Alabama Medical College.

Hunting was his only hobby until failing health put an end to it. Since then and until his death, he had made his Blount County farm his only diversion.

James Richard Williams was born in Jefferson County on Sunday, 13 December 1936.



DRS. JAMES R. AND JAMES H. WILLIAMS

He entered the University of Alabama in 1954, earning his baccalaureate degree four years later, his M. D. four years after that, in 1962. He interned at Lloyd Noland, 1962-63, and for three years after that was a resident and chief resident in obstetrics and gynecology at the Medical College of Alabama. He entered the Navy as a lieutenant in 1966, and three years later returned to civilian life, holding the rank of lieutenant commander.

His three years of practice with his father began in 1969.

The younger Dr. Williams was married in May, 1963, to Florence N. Douglass of Birmingham, and there are two children: James

Douglass Williams, 6; and Marguerite Jean Williams, 4.

This Dr. Williams holds membership in all the professional societies and associations to which his father belonged, and in addition is a member of the American Fertility Society.

It is interesting to note that of the four generations named here, all four wore the first name of James, but no two had the same middle initial: 1) James Monroe, 2) James Hayes, 3) James Richard, and 4) James Douglass.

Risk of Lung Cancer Less for Ex-Smokers

We know that smoking is harmful. But does it help to stop once the damage has been done? Yes, according to a recent study which found evidence to support the conclusion that "cigarette smokers who give up the habit reduce their risk of acquiring lung cancer."

Dr. Oscar Auerbach, of the Veterans Administration Hospital in East Orange, New Jersey, performed post mortem examinations of bronchial tissue taken from 758 people who had died of cancers other than lung

cancer. Among those who were regular smokers at the time of death, 93.2 per cent had abnormal and possibly precancerous cells. In contrast, abnormal cells were found in only 6 per cent of former smokers—persons who had smoked for at least 10 years, but not for 5 years prior to death. (Only 1.2 per cent of those who had never smoked were found to have such cells.)

"The Odds Improve for Ex-Smokers," in *Today's Health*, December 1971)



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Contraindications: History of hypersensitivity to thiabendazole.

Warnings: If hypersensitivity reactions occur, drug should be discontinued immediately and not resumed. Rarely, erythema multiforme has been associated with thiabendazole therapy; in severe cases (Stevens-Johnson syndrome), fatalities have occurred. Because CNS side effects may occur quite frequently, activities requiring mental alertness should be avoided. Safe use in pregnancy or lactation has not been established.

Precautions: Ideally, supportive therapy is indicated for anemic, dehydrated, or malnourished patients prior to initiation of anthelmintic therapy. In presence of hepatic or renal dysfunction,

patients should be carefully monitored.

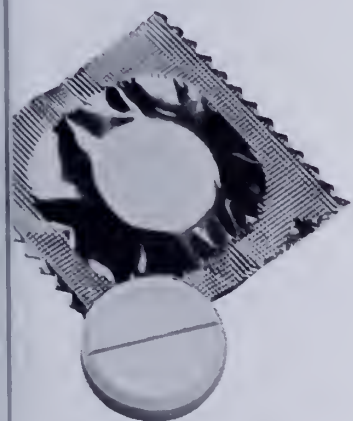
Adverse Reactions: Most frequently encountered are anorexia, nausea, vomiting, and dizziness. Less frequently, diarrhea, epigastric distress, pruritus, weariness, drowsiness, giddiness, and headache have occurred. Rarely, tinnitus, hyperirritability, numbness, abnormal sensation in eyes, blurring of vision, xanthopsia; hypotension, collapse; enuresis; transient rise in cephalin flocculation and SGOT; perianal rash, cholestasis, parenchymal liver damage; hyperglycemia; transient leukocytosis; malodor of the urine, crystalluria, hematuria; appearance of Ascaris in the mouth and nose. Hypersensitivity reactions

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keep to the
regimen you prescribe

fever, facial flush, chills, conjunctival injection, edema, anaphylaxis, skin rashes, erythema multiforme (including Stevens-Johnson syndrome), and lymphadenopathy.
Ind: Chewable tablets, containing 500 mg thiabendazole, 36 tablets per box, strip packaged, individually foil wrapped; oral suspension, containing 500 mg thiabendazole per 5 cc, in bottles of 120 cc.

For more detailed information, consult your MSD representative or see the Direction Circular. Merck Sharp & Dohme, a division of Merck & Co., Inc., West Point, Pa. 19486

MSD
MERCK
SHARP
DOHME

addendum

INDICATION | DOSAGE SCHEDULE

MINTEZOL[®] (Thiabendazole, MSD) has demonstrated effectiveness against a broad spectrum of nematode infestations, whether encountered singly or in combination. Dosages are weight related; therefore, a weight-dose chart is included in the Direction Circular for your convenience when writing a prescription. MINTEZOL should be given after meals if possible.

INDICATIONS	DOSAGE (1st Day)	ADDITIONAL REGIMEN	COMMENTS
Pinworm disease	Two doses of 1 tablet/50 lb	Repeat 7 days later	This regimen is designed to reduce the risk of reinfection. However, if not practical, repeat the regimen the next day.
Threadworm,* large roundworm,* hookworm,* and whipworm* disease	Two doses of 1 tablet/50 lb	Repeat the next day	Alternatively, a single dose of 2 tablets/50 lb may be given. However, a higher incidence of side effects should be expected.
Creeping eruption	Two doses of 1 tablet/50 lb	Repeat the next day	If active lesions are still present 2 days after completing this regimen, a second course is recommended.
Symptoms of trichinosis* during the invasive phase of the disease	Two doses of 1 tablet/50 lb	Repeat for 2 to 4 successive days	The optimal dosage for the treatment of trichinosis has not been established.

The recommended maximal daily dosage is 3 g (6 tablets).

*Clinical experience with thiabendazole for treatment of each of these conditions in children weighing less than 30 lb has been limited.



Alabama Department of Public Health



Emergency Medical Services In Alabama

Jo Strickland

Brakes shriek, horns blow, a crash sounds, glass shatters, then silence followed by low moans gives us a vivid picture of an automobile wreck. These incidents in our state are alarming. What follows should be even more alarming. People die needlessly. National statistics show that more than 20 per cent of the lives lost in wrecks could have been saved had efficient help arrived soon enough. "Trauma" has been quoted by many physicians as the neglected disease of our society. "The gap between what could be done and what is being done is wider than for any other disease," says Dr. William T. Fitts, Jr., professor of surgery at the University of Pennsylvania.

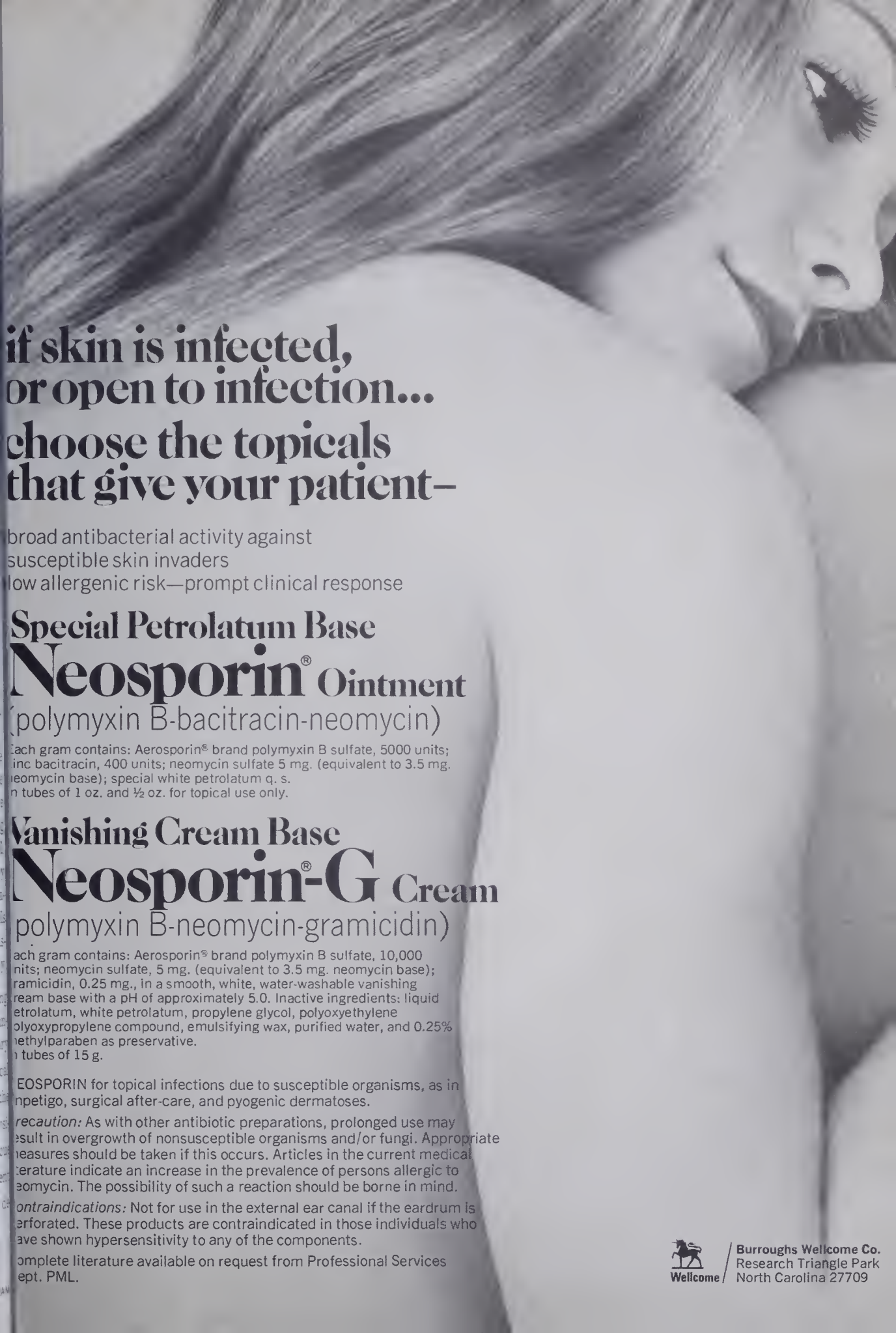
Alabama newspapers report from 10-20 deaths almost every week-end. Were all of these instant deaths or could some of them have been saved? You bleed to death in four - six minutes unless bleeding is stopped proficiently. Breathing stops but it may be started again in four - six minutes when persons act promptly. Who performs these life saving techniques—citizens who pass by the scene, ambulance personnel, law enforcement officers; or maybe the person is hauled to some hospital to expire enroute or awaiting attention by a physician on call. Where you decide to have your accident matters so far as the care you will receive in Alabama. How well prepared is your area with ambulances, physicians, hospital staff, first aid training, and rescue personnel?

Since the passage of the National Highway Safety Act in 1966, emergency medical services which is standard 311 deals with this vital area. Many cities in Alabama have taken advantage of this opportunity to upgrade their services. Forty ambulances have been purchased with 50-50 matching Federal funds distributed by the Governor's Highway and Traffic Safety Coordinator. These vehicles have sufficient headroom space and adequate equipment to allow attendants to administer first aid enroute to the hospital. In this area training is necessary. Standard and advanced first aid is recommended for all citizens, with added hours of training for ambulance personnel, fire departments and law enforcement officers. Courses, taught by physicians are being offered throughout the State which provides 81 hours of intensive training for involved personnel. Rescue squads participate in a continuous training program with their volunteer personnel. These men are among the most efficiently trained in emergency rescue and transportation. Practical sessions and simulated drills must be conducted over and over again to assure a city that all persons react promptly.

The response of a local area by organizing their own Emergency Medical Services Council solves many problems. Local needs vary and must be considered by interested local citizens. The council may be as large as the community desires and should include physicians, nurses, ambulance services, rescue squads, fire department, police department, hospital personnel, funeral homes, civil de-

Miss Strickland is Health Educator with the State Department of Public Health.

(Continued on Page 49)



**if skin is infected,
or open to infection...
choose the topicals
that give your patient—**

broad antibacterial activity against
susceptible skin invaders
low allergenic risk—prompt clinical response

Special Petrolatum Base
Neosporin[®] Ointment
(polymyxin B-bacitracin-neomycin)

Each gram contains: Aerosporin[®] brand polymyxin B sulfate, 5000 units;
neomycin sulfate, 400 units; bacitracin, 400 units; neomycin sulfate 5 mg. (equivalent to 3.5 mg.
neomycin base); special white petrolatum q. s.
in tubes of 1 oz. and ½ oz. for topical use only.

Vanishing Cream Base
Neosporin[®]-G Cream
(polymyxin B-neomycin-gramicidin)

Each gram contains: Aerosporin[®] brand polymyxin B sulfate, 10,000
units; neomycin sulfate, 5 mg. (equivalent to 3.5 mg. neomycin base);
gramicidin, 0.25 mg., in a smooth, white, water-washable vanishing
cream base with a pH of approximately 5.0. Inactive ingredients: liquid
petrolatum, white petrolatum, propylene glycol, polyoxyethylene
polyoxypropylene compound, emulsifying wax, purified water, and 0.25%
methylparaben as preservative.
in tubes of 15 g.

NEOSPORIN for topical infections due to susceptible organisms, as in
impetigo, surgical after-care, and pyogenic dermatoses.

Precaution: As with other antibiotic preparations, prolonged use may
result in overgrowth of nonsusceptible organisms and/or fungi. Appropriate
measures should be taken if this occurs. Articles in the current medical
literature indicate an increase in the prevalence of persons allergic to
neomycin. The possibility of such a reaction should be borne in mind.

Contraindications: Not for use in the external ear canal if the eardrum is
perforated. These products are contraindicated in those individuals who
have shown hypersensitivity to any of the components.

Complete literature available on request from Professional Services
Dept. PML.



Burroughs Wellcome Co.
Research Triangle Park
North Carolina 27709



When you select this familiar antibiotic for IV infusion you have available a broad dosage range that hospitalized patients may need.

Intravenous Lincocin (lincomycin hydrochloride, Upjohn), with its 1.2 to 8 grams/day dosage range, covers many serious and even life-threatening infections. Lincocin is effective in infections due to susceptible strains of streptococci, pneumococci, and staphylococci. Lincocin IV therefore can be as useful in your hospitalized patients as its IM use has proved to be in your office patients. As with all antibiotics, *in vitro* susceptibility studies should be performed.

1.2 to 8 grams/day IV dosage range:

Most hospitalized patients with uncomplicated pneumonias respond satisfactorily to 1.2 to 1.8 grams/day of Lincocin IV. These doses may have to be increased for more serious infections.

In life-threatening situations as much as 8 grams/day has been administered intravenously to adults.

In usual IV doses, Lincocin (lincomycin hydrochloride, Upjohn) should be diluted in 250 ml or more of normal saline solution or 5% glucose in water. But when 4 grams or more per day is given, Lincocin should be diluted in not less than 500 ml of either solution, and the rate of administration should not exceed 100 ml/hour. Too rapid intravenous administration of doses exceeding 4 grams may result in hypotension or, in rare instances, cardiopulmonary arrest.

Effective gram-positive antibiotic:

Lincocin IV is effective in respiratory tract, skin and soft-tissue, and bone



infections caused by susceptible strains of pneumococci, streptococci, and staphylococci, including penicillin-resistant strains. Staphylococcal strains resistant to Lincocin (lincomycin hydrochloride, Upjohn) have been recovered. Before initiating therapy, culture and susceptibility studies should be performed. Lincocin has proved valuable in treating patients hypersensitive to penicillin or cephalosporins, since Lincocin does not share antigenicity with these compounds. However, hypersensitivity reactions have been reported, some of these in patients known to be sensitive to penicillin.

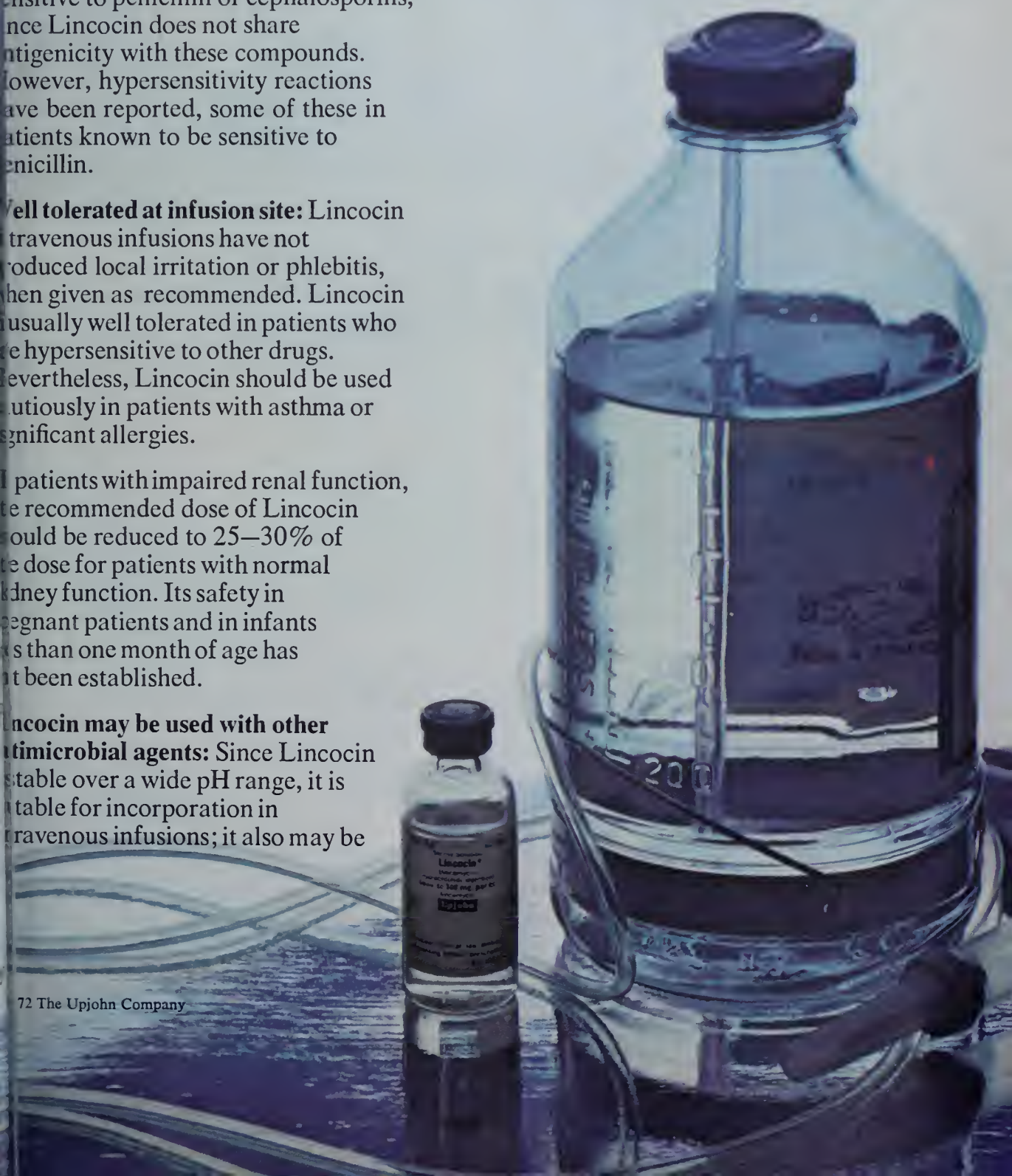
Well tolerated at infusion site: Lincocin intravenous infusions have not produced local irritation or phlebitis, when given as recommended. Lincocin is usually well tolerated in patients who are hypersensitive to other drugs. Nevertheless, Lincocin should be used cautiously in patients with asthma or significant allergies.

In patients with impaired renal function, the recommended dose of Lincocin should be reduced to 25–30% of the dose for patients with normal kidney function. Its safety in pregnant patients and in infants less than one month of age has not been established.

Lincocin may be used with other antimicrobial agents: Since Lincocin is stable over a wide pH range, it is suitable for incorporation in intravenous infusions; it also may be

administered concomitantly with other antimicrobial agents when indicated. However, Lincocin should not be used with erythromycin, as *in vitro* antagonism has been reported.

Lincocin[®]
Sterile Solution (300 mg per ml)
(lincomycin hydrochloride, Upjohn)
For further prescribing information, please see following page.





Sterile Solution (300 mg. per ml.)

Lincocin[®]

(lincomycin hydrochloride, Upjohn)

Up to 8 grams per day by IV infusion for hospitalized patients with life-threatening infections.

Lincocin is effective in infections due to susceptible strains of streptococci, pneumococci, and staphylococci. As with all antibiotics, *in vitro* susceptibility studies should be performed.

Each preparation contains:

Lincomycin hydrochloride monohydrate equivalent to lincomycin base

250 mg Pediatric Capsule 250 mg
500 mg Capsule 500 mg
*Sterile Solution per 1 ml 300 mg
Syrup per 5 ml 250 mg

*Contains also: Benzyl Alcohol 9 mg; and, Water for Injection—q.s.

Lincocin (lincomycin hydrochloride) is indicated in infections due to susceptible strains of staphylococci, pneumococci, and streptococci. *In vitro* susceptibility studies should be performed. Cross resistance has not been demonstrated with penicillin, ampicillin, cephalosporins, chloramphenicol or the tetracyclines. Some cross resistance with erythromycin has been reported. Studies indicate that Lincocin does not share antigenicity with penicillin compounds.

CONTRAINDICATIONS: History of prior hypersensitivity to lincomycin or clindamycin. Not indicated in the treatment of viral or minor bacterial infections.

WARNINGS: CASES OF SEVERE AND PERSISTENT DIARRHEA HAVE BEEN REPORTED AND HAVE AT TIMES NECESSITATED DISCONTINUANCE OF THE DRUG. THIS DIARRHEA HAS BEEN OCCASIONALLY ASSOCIATED WITH BLOOD AND MUCUS IN THE STOOLS AND HAS AT TIMES RESULTED IN AN ACUTE COLITIS. THIS SIDE EFFECT USUALLY HAS BEEN ASSOCIATED WITH THE ORAL DOSAGE FORM BUT OCCASIONALLY HAS

BEEN REPORTED FOLLOWING PARENTERAL THERAPY. A careful inquiry should be made concerning previous sensitivities to drugs or other allergens. Safety for use in pregnancy has not been established and Lincocin (lincomycin hydrochloride) is not indicated in the newborn. Reduce dose 25 to 30% in patients with severe impairment of renal function.

PRECAUTIONS: Like any drug, Lincocin should be used with caution in patients having a history of asthma or significant allergies. Overgrowth of nonsusceptible organisms, particularly yeasts, may occur and require appropriate measures. Patients with pre-existing monilial infections requiring Lincocin therapy should be given concomitant antimoniial treatment. During prolonged Lincocin therapy, periodic liver function studies and blood counts should be performed. Not recommended (inadequate data) in patients with pre-existing liver disease unless special clinical circumstances indicate. Continue treatment of β -hemolytic streptococci infections for 10 days to diminish likelihood of rheumatic fever or glomerulonephritis.

ADVERSE REACTIONS: *Gastrointestinal*—Glossitis, stomatitis, nausea, vomiting. Persistent diarrhea, enterocolitis, and pruritus ani. *Hemopoietic*—Neutropenia, leukopenia, agranulocytosis, and thrombocytopenic purpura have been reported. *Hypersensitivity reactions*—Hypersensitivity reactions such as angioneurotic edema, serum sickness, and anaphylaxis have been reported, sometimes in patients sensitive to penicillin. If allergic reaction occurs, discontinue drug. Have epinephrine, corticosteroids, and antihista-

mines available for emergency treatment. *Skin and mucous membranes*—Skin rash, urticaria, vaginitis, and rare instances of foliative and vesicobullous dermatitis have been reported. *Liver*—Although no direct relationship to liver dysfunction is established, jaundice and abnormal liver function (particularly serum transaminase) have been observed in a few instances. *Cardiovascular*—Instances of hypotension following parenteral administration have been reported particularly after too rapid IV administration. Rare instances of cardiopulmonary rest have been reported after too rapid administration. If 4.0 grams or more administered IV, dilute in 500 ml of fluid; administer no faster than 100 ml per hour. *Special senses*—Tinnitus and vertigo have been reported occasionally. *Local reaction*—Excellent local tolerance demonstrated intramuscularly administered Lincocin (lincomycin hydrochloride). Reports of following injection have been infrequent. Intravenous administration of Lincocin 250 to 500 ml of 5% glucose in distilled water or normal saline has produced local irritation or phlebitis.

HOW SUPPLIED: 250 mg and 500 mg Capsules—bottles of 24 and 100. Sterile Solution, 300 mg per ml—2 and 10 ml and 2 ml syringe. Syrup, 250 mg per 5 ml—60 ml and pint bottles.

For additional product information, consult the package insert or see your Upjohn representative.

MED B-6-S (KZL-7) JA71-

The Upjohn Company
Kalamazoo, Michigan 49001

Upjohn

(Continued from Page 44)

fense, Red Cross, health department, sheriff, troopers, municipal and/or county officials and others interested in the delivery of emergency care and rescue. This council needs to consider: (1) time response to accidents, (2) transportation, (3) training of personnel, (4) communications, (5) equipment in ambulances and within emergency departments, (6) community support, (7) maximum hospital care, (8) disaster drills, (9) back-up support agencies and (10) follow-up suggestions and investigations.

The biggest hindrance to any emergency scene is the gawking individual who persists in his star-gazing of the situation with ready advice which is generally incorrect. What Alabama needs is the trained, informed individual who reacts promptly and correctly in an emergency and relinquishes his position when professional help arrives. Lives are lost when by-standers get in the way and traffic jams hinder aid in getting to the

scene. If you cannot assist drive on out of the way. Others who are competent may help if you do not interfere.

The 1971 Legislature passed act number 1590 which gave the Alabama Department of Public Health the authority to establish reasonable rules and regulations regarding ambulance service. These rules and regulations will be determined with the assistance of a ten-man advisory board representing the pervayers of service. This bill will also deal with licensing and certification of qualified personnel. At this point recommendations have been made but standards have not been adopted.

The time for quality Emergency Medical Services statewide is now! Automobile travel is essential! Accidents seem more and more prevalent! Human Life is irreplaceable! Interested citizens and alert local governing bodies are urged to pinpoint Emergency Medical Services in their areas of Alabama.

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* * *

Private general practice available in Decatur. \$4,000.00 per month minimum collections guaranteed. Not a loan. Good schools. Beautiful hill and lake country. Send C. V. to or call Sanford Smith, Director of Physician Planning, Hospital Affiliates, Inc., P. O. Box 9836, Houston, Texas 77015. 713/453-6324.

* * *

Now form follows function

Only **Candeptin** (candicidin)
gives you this unique form...
a soft gelatin capsule —
highly effective therapy for all
your vaginal moniliasis patients



CANDEPTIN® (candicidin) VAGELETTES™
Vaginal Capsules... a unique dosage form...
anatomically and therapeutically designed to extend
flexibility in the treatment of vaginal moniliasis.

Virtually unlimited application

CANDEPTIN VAGELETTES Vaginal Capsules provide
the specific high potency antimicrobial agent,
candicidin, in a soft gelatin capsule — the shape
designed with your patient in mind. It permits easy
manual insertion without the need for an applicator
or inserter... of particular value for the pregnant
patient... for *intravaginal use*. By cutting off the tip of
the narrow soft end, the contents can be extruded
through an intact hymen for *intravaginal use*. And
it is readily adaptable to *topical application* for
labial involvement, and/or *intravaginal use* to treat
mucosal infection.

CANDEPTIN (candicidin) provides:

Rapid results

Prompt, symptomatic relief — itching, burning,
and discharge subside in 48-72 hours!¹

Soothing, miscible ointment permits complete
contact with affected tissue.

Usually cures in a single 14-day course of therapy.^{2,3,4}

Safe

Exact dosage assured.^{2,3}

No side effects, clinical reports of irritation or
sensitization extremely rare.

Convenience

Easy to use intravaginally and/or topically
for labial involvement.

Encourages patient acceptance and cooperation.
Therapy is easy to start in your office.

Clinical proof of potency

CANDEPTIN (candicidin) is significantly more potent
in vitro than nystatin.⁵ CANDEPTIN Vaginal Ointment
and Tablets have a clinical record of cure rates
of 90% and more in pregnant and non-pregnant
patients.^{1,4,6} In recent studies on CANDEPTIN
VAGELETTES Vaginal Capsules, involving both gravid
and non-gravid patients, a 100% culture-confirmed
cure rate was achieved with a single 14-day
course of therapy.^{2,3}

Unique

CANDEPTIN® (candicidin)
VAGELETTES™ Vaginal Capsule

Description: CANDEPTIN (candidin)

Vaginal Ointment contains a dispersion of candidin powder equivalent to 0.6 mg. per gm. or 0.06% Candidin activity in U.S.P. petrolatum. 3 mg. of Candidin is contained in 5 gm. of ointment or one applicatorful. CANDEPTIN Vaginal Tablets contain Candidin powder equivalent to 3 mg. (0.3%) Candidin activity dispersed in starch, lactose and magnesium stearate. CANDEPTIN VAGELETES Vaginal Capsules contain 3 mg. of Candidin activity dispersed in 5 gm. U.S.P. petrolatum.

Action: CANDEPTIN Vaginal Ointment, Vaginal Tablets, and VAGELETES Vaginal Capsules possess anti-monilial activity.

Indications: Vaginitis due to *Candida albicans* and other *Candida* species.

Contraindications: Contraindicated for patients known to be sensitive to any of its components. During pregnancy manual Tablet or VAGELETES Capsule insertion may be preferred since the use of the ointment applicator or tablet inserter may be contraindicated.

Caution: During treatment it is recommended that the patient refrain from sexual intercourse or the husband wear a condom to avoid re-infection.

Adverse Reaction: Clinical reports of sensitization or temporary irritation with CANDEPTIN Vaginal Ointment, Vaginal Tablets or VAGELETES Vaginal Capsules have been extremely rare.

Dosage: One vaginal applicatorful of CANDEPTIN Ointment or one Vaginal Tablet or one VAGELETES Vaginal Capsule is inserted high in the vagina twice a day, in the morning and at bedtime, for 14 days. Treatment may be repeated if symptoms persist or reappear.

Available Dosage Forms: CANDEPTIN Vaginal Ointment is supplied in 75 gm. tubes with applicator (14-day regimen requires 2 tubes). CANDEPTIN Vaginal Tablets are packaged in boxes of 28, in foil with inserter—enough for a full course of treatment. CANDEPTIN VAGELETES Vaginal Capsules are packaged in boxes of 14 (14-day regimen requires 2 boxes.)

Store under refrigeration to insure full potency.

Federal law prohibits dispensing without prescription.

References: 1. Olsen, J.R.: *Journal-Lancet* 85: 287 (July) 1965. 2. Giorlando, S.W.: *Ob/Gyn Dig.* 13:32 (Sept.) 1971. 3. Decker, A.: Case Reports on File, Medical Department, Julius Schmid. 4. Giorlando, S.W., Torres, J.F., and Muscillo, G.: *Am. J. Obst. & Gynec.* 90: 370 (Oct. 1) 1964. 5. Lechevalier, H.: *Antibiotics Annual 1959-1960*. New York, Antibiotica Inc., 1960. pp. 614-618. 6. Friedel, H.J.: *Maryland M.J.* 15:36 (Feb.) 1966.



Julius Schmid Pharmaceuticals
423 West 55th Street
New York, New York 10019

CANDEPTIN® (candidin)

Vaginal Tablets

Vaginal Ointment

and VAGELETES™ Vaginal Capsules

Darvon

A recent article published in the *New England Journal of Medicine* reported that the efficacy of Darvon as a pain reliever could not be substantiated by a double-blind study. The authors' conclusions are difficult to understand.

Darvon was admitted to the market as an analgesic by itself or in combination with aspirin and other analgesic drugs after full clinical trials were carried out to the satisfaction of the Food and Drug Administration. This FDA approval was reinforced by a study of another salt of propoxyphene — Darvon-N™—a study which was continued for several years and culminated in FDA approval, at a time when the FDA is meticulous in assessment of effectiveness.

It is a common clinical observation that Darvon serves well and probably best when it is combined with other analgesic drugs and especially with aspirin. The combination of a peripherally acting substance with Darvon, which is primarily central in action, is remarkably effective.

The NAS/NRC panel commented that "the combination of Darvon with an antipyretic-analgesic of the aspirin type results in analgesia superior to that achieved by either drug administered alone."

Another mysterious development came to light when the NEJM article reported that, in one method which was used to analyze the results, 65 mg of Darvon ranked higher than 65 mg of codeine.

Darvon products have been in widespread clinical use for 15 years. As the politicians express it, "Let's look at the record." It is a record of millions of patients who have obtained satisfactory relief of mild to moderate pain from Darvon and its combinations, with an unusually high degree of safety.

If you make people think they're thinking, they'll love you. If you really make them think they'll hate you. —Don Marquis.

PHYSICIAN PLACEMENT SERVICE IN ALABAMA

The Physician Placement Service of the Medical Association of the State of Alabama is designed to assist both physicians and communities. MASA members having knowledge of practice opportunities or wishing to relocate their own practices are urged to communicate with the Placement Service. For further information: write Mr. Emmett Wyatt, Executive Assistant, Medical Association of the State of Alabama, 19 South Jackson Street, Montgomery, Alabama 36104, or Telephone 263-6441.

Locations Wanted

General Practice—

Age 32; University of Texas, Southwestern, 1968; seeking institutional practice; Available January 1973. LW-3/3

Age 41; Temple University, 1963; National Board; Board eligible; seeking associate or group practice; Available December 1972. LW-3/4

Age 52; Marquette University, 1952; Board certified; seeking group, industrial, institutional or emergency room practice. LW-3/5

Age 45; Medical School of Iowa, 1956; Board certified; seeking associate, group, industrial, institutional practice or emergency room, student health - teaching family practice; Available September 1, 1972. LW-3/6

Age 56; Ohio State Univ., 1943; Board certified; seeking associate, group, industrial, or institutional practice. LW-3/7

Internal Medicine—

Age 31; Medical College of Alabama, 1968; National Board; Available July 1972. LW-13/6

Age 29; Emory University School of Medicine, 1966; Board eligible, seeking group practice. Available July 1972. LW-4/5

Age 31; University of Miami, 1964; Board certified, seeking group or institutional practice. Available January 1973. LW-4/7

Age 31; University of Kentucky, 1966; seeking group practice; Board eligible; Available July 1972. LW-4/11

Age 31; Ohio State, 1965; Board certified; seeking group practice; Available July, 1972. LW-4/12

Age 29; National University of Mexico, 1966; seeking group or institutional practice; Available July 15, 1972. LW-4/13

Age 33; Cornell University, 1966; National Board; Board certified; seeking assistant or associate practice. LW-4/14

Age 30; Univ. of Virginia, 1967; Board eligible; seeking group practice; Available June 30, 1973. LW-4/15

Age 30; Vanderbilt University, 1967; National Board; Board eligible; seeking solo, associate, or group practice; Available July, 1973. LW-4/16

Neurology

Age 30; Northwestern University, 1967; National Board; Board eligible; seeking solo, associate, or group practice; Available June 1973. LW-5/1

Obstetrics-Gynecology—

Age 49; Marquette University, 1945; Board certified; seeking institutional practice. LW-15/1

Age 57; Marquette University, 1943; Board certified; seeking industrial, institutional or clinical practice. LW-15/2

Ophthalmology—

Age 31; Chicago Medical School, 1966; National Board; seeking associate or group practice; Available July, 1973. LW-6/6

Age 32; State University of New York at Buffalo, 1966; National Board; seeking associate practice; Available July 1972. LW-6/7

Age 42; George Washington University, 1959; National Board; Board certified; seeking group or institutional practice; Available 1972. LW-6/8

Orthopedic Surgery—

Age 34; University of California, 1963; seeking group or associate practice. Available July 1972. LW-14/1

Age 31, Temple University, 1965; National Board; seeking group or associate practice. Available July 1972. LW-14/2

University of Illinois, 1965; National Board; seeking group or associate practice. Available July 1, 1972. LW-14/3

Age 31; University of Alabama, 1966; National Board; Available July, 1973. LW-14/4

Age 31; Baylor, 1966; Board eligible; seeking associate practice; available July, 1973. LW-14/5

Otolaryngology—

Age 32; Temple University, 1965; National Board; Board eligible; seeking solo or group practice; Available August 1972. LW-16/1

Age 32; Tulane University Medical School, 1965; Board certified; seeking solo, associate, or group practice; Available September 1, 1972. LW-16/2

Pathology—

Age 33; University of Texas, 1965; National Board; Board certified; seeking group or associate practice; Available September 1, 1972. LW-8/7

PLACEMENT SERVICE

Age 32; Duke University, 1965; Board certified; seeking group practice. LW-8/9

Radiology—

Age 30; Medical College of Virginia, 1966; National Board, seeking solo or associate practice. Available June 1972. LW-10/4

Age 31; Medical College of Georgia, 1966; National Board; Board certified; seeking group practice; Available August 1, 1972. LW-10/6

Age 31; University of Iowa, 1966; seeking assistant or associate practice; Available October 1, 1972. LW-10/8

Age 32; Louisiana State, 1966; Available September 1, 1972. LW-10/9

Age 43; Univ. of Tennessee, 1962; Available July 1, 1973. LW-10/10

Age 33; Univ. of Kentucky, 1966; Board eligible; seeking solo, associate, or group practice; Available November, 1972. LW-10/11

Surgery—

Age 33; University of Maryland, 1965; seeking solo, group, or associate practice; Available July 1973. LW-11/7

Age 33; University of Tennessee, 1967; seeking practice in General Surgery. Available July 1972. LW-11/8

Age 48; Duke University, 1947; National Board; Board certified; seeking group practice in general surgery; Available July 1, 1972. LW-11/9

Age 39; Creighton University School of Medicine, 1957; National Board; Board certified; seeking associate or group practice; Available June, 1972. LW-11/10

Age 34; New York University School of Medicine, 1964; National Board; Board certified; seeking solo, associate, group or institutional practice; Available July 1, 1972. LW-11/12

Age 32; Medical College of Virginia, 1965; Board eligible; seeking associate or group practice; Available August, 1972. LW-11/13

Age 35; Univ. of Oklahoma, 1964; Board eligible; seeking associate or group practice; Available Jan. 1, 1973. LW-11/14

Urology—

Age 34; Medical College of Georgia, 1967; seeking group or associate practice; Available July 1972. LW-12/1

Age 31; Northwestern University, 1965; seeking associate or group practice; Available July 1, 1972. LW-12/3

Age 36; Louisiana State University Medical School, 1961; Board eligible; seeking associate practice; Available December, 1972. LW-12/4

Age 35; Univ. of Miami, 1964; National Board; Board eligible; seeking associate, group, or institutional practice; Available Jan. 1973. LW-12/5



Physicians Wanted

Special Openings—

Wanted, qualified physicians in either OB-GYN, Internal Medicine, or Thoracic Vascular Surgery, to practice with group clinic. The clinic is a 16 man multi-specialty group, and is located in a city of 35,000 with a trade area of 160,000. Excellent recreational facilities and educational opportunities in the area. PW-14

Opportunity for Internist, Board Certified or eligible, interested in Cardiology, in town of 11,000 population—service area 40,000—south Alabama. Modern 86-Bed (JCAH) general hospital with 8-Bed Combination Intensive and Coronary Care Unit under construction. Seven GP's, Certified Surgeon, Radiologist—excellent city school system. PW-15

Internists—one or two needed in University town of 40,000 plus population in Southeast Alabama—Young vigorous multi-specialty group—Generous initial salary and early partnership. PW-16

Internists, Board-certified or eligible. One needed now and another in 1 or 2 years. For early partnership with internist in south Alabama city of 40,000 plus population. New office building adjacent to 181-bed hospital. Practice largely hospital in-patient and Cardiology. PW-21

Opportunity for a Board certified or eligible surgeon to be associated with a Board surgeon in city of 150,000 population. PW-21/1

General Practitioner or Internist for associate or separate practice in Birmingham. Modern office space and excellent hospital facilities. PW-26

Internist wanted, Board certified, Town of 10,000 population, Southwest Alabama. New 51-bed general hospital, I.C.U. Physicians: 5 GP's, Certified Surgeon and Radiologist. Within easy access, excellent fresh and salt water fishing, hunting including deer and turkey. Public and private schools. One hour drive from two metropolitan areas. PW-18

Wanted, internists, generalists, radiologist, orthopedist, general surgeons, town of 15,000 population in county of 45,000 population in southeast Alabama. Attractive for a group setup. High income area and marked scarcity of physicians. Excellent schools and recreational facilities. Newly expanded hospital. PW-17

Wanted: Immediately. Pediatrician to replace recently deceased partner in northeast Alabama. Enter busy practice in a predominantly GP area. Enjoy rural, quiet living with nearby scenic and recreational facilities. Salary, practice, everything negotiable. PW-19

Wanted: General Practitioner or Internist to join active 4-M. D. professional association—3-GP's, 1 Board Surgeon. Modern offices, accredited 75 bed hospital. Beautiful town of 10,000 with excellent churches, schools (public and private). Salary for 3-6 months then arrangement for full partnership. PW-22

General Practitioners—

For town of 2,000 population located in trade area of 15,000 population in northeast Alabama. Nearest metropolitan centers 30 miles distance. Industrial area. Clinic and some office equipment available. Several churches, schools, and civic clubs. PW-23

Opportunity for GP to join well established four-man partnership; three general practitioners and one board certified surgeon. Practice located in city of 8,000 population, trade area of 60,000, north-central Alabama. Modern new partnership-owned offices adjacent to modern 125-bed fully accredited hospital. Salaried first year with possible partnership status at end of first year. PW-27

For community of 1,500 population located in south Alabama near city of 12,000 population. Hospitals located within 25 miles. Office space and equipment available. Farming, cattle and textile industries in the area. Several churches and school. Civic clubs and golf courses. PW-1-1

Opportunity for two general practitioners to assist two established GP's in a progressive comprehensive medical program in rural county of 12,500 population. Modern new office building, fully equipped, located in county seat, 20 miles west of Montgomery, Alabama. Excellent salary. Several churches, school, and recreation areas. PW-1/8

Opportunity in town of 3,000 population located in trade area of 12,000 population in south Alabama. 23-bed hospital. Office space available. Numerous churches and schools. Recreational areas nearby. PW-1/11

Opportunity for associate in general practice or take over general practice in town of 1,200 population in south central Alabama with trade area of 5,000 population. Well established practice and well equipped office. Located near recreational area. PW-1/12

Opportunity in town of 3,000 population in trade area of 15,000 located in West Alabama. Clinic building available with equipment. Farming and several small industries. Several schools and churches. PW-1/13

Dr. Dimick Director For Continuing Education Course

A Continuing Education Course for Emergency Department Physicians and Nurses will be held at the University of Alabama Medical Center, September 12-14, 1972.

The Course will be entitled "Treatment of the Seriously Injured or Ill in the Emergency Department" and is being sponsored by the Committee on Trauma, American College of Surgeons.

It is being locally co-sponsored by the Alabama Committee on Trauma, American College of Surgeons and the Department of Surgery of the University of Alabama School of Medicine, Alabama Regional Medical Program, and School of Nursing, UAB. Alan R. Dimick, M. D., assistant professor of surgery, is Course Director.

The purpose of the Course is to provide continuing education for full time or on-call Emergency Department physicians and Emergency Department nurses in rendering improved professional services. Lectures and demonstrations will deal with recent advancements in the knowledge of emergency medical services, and with new developments in resuscitation techniques. Course subjects will also include the treatment of less serious conditions in patients often seeing medical service in the Emergency Department.

The 10th Annual Cancer Chemotherapy Conference will be held at the University of Wisconsin, Madison, on September 6-8. The program will include a review and forward look at anti-cancer therapy, multiple drug therapy of solid tumors and leukemias, the role of x-ray therapy, immunology and virology in the treatment of cancer. For information contact Dr. G. Ramirez, 714C University Hospitals, Madison, Wisconsin 53706.



around the state

Vital Statistics

NEW MEMBERS

Baldwin County

Mahoney, Joseph Aloysius, b 98, mc Kansas City University of Physicians & Surgeons, '26, recip. Mass. '71, 1605-A Hand Avenue, Bay Minette, Alabama 36507.

Elmore County

Hall, Dennis Edward, b 37, mc U. Tenn. '66, recip. Tenn. '71, Tallassee, Alabama 36078. Oph.

Houston County

Owen, James Caney, Jr., b 38, mc U. Tenn. '64, recip. Fla. '72, 509 West Main Street, Dothan, Alabama 36301. Or.

Stapleton, James Bowdoin, b 05, mc Tulane, '32, recip. Fla. '72, Box 2087, Dothan, Alabama 36301.

Lee County

Walsh, Robert Eugene, b 12, mc Duke U. '40, recip. NBME '71, 450 Cary Drive, Auburn, Alabama 36830. GP-Anes.

Marion County

Fuson, Vernon Ray, b 28, mc U. Louisville '67, recip. Kentucky '70, 411 Gilmer, Tallassee Medical Clinic, P. A., Tallassee, Alabama 36078. Gp.

Woddail, Joseph Doyle, b 16, mc Georgia '42, recip. Ga. '71, Hamilton, Alabama 35570. P.

Morgan County

Perry, William John, b 17, mc Duke U. '53, sb 54, Doctor's Clinic, P. O. Box 930, Hartselle, Alabama 35640.

Tuscaloosa County

Bane, Denis Melvin, b 43, mc Temple U. '69, recip. NBME '71, 217 State Loop, Columbia AFB, Miss. 39701.

Drynan, James Robert, b 40, mc Loyola U. '66, recip. Colorado '71, 112 Mississippi Avenue, Columbus, Miss. 39701.

Goodall, Harrison Malone, b 31, mc U. Alabama '58, sb 59, Druid City Hospital, Tuscaloosa, Alabama 35401. S.

Hensle, Terry Willmott, b 41, mc Cornell U. '68, recip. NBME '71, 165 Tech Loop, Columbus AFB, Miss. 39701.

MEMBERS DECEASED

Tuscaloosa County

Clements, Ralph Mayo, Tuscaloosa, Alabama, Deceased.

MEMBERS REMOVED

Dale County

Ouzts, Len M., LaJunta, Colorado—Moved from State.

Jefferson County

Beckering, Raymond E., Birmingham, Alabama, Transfer to Nonmember.

Cooley, Harold N., Montgomery, Alabama, Transfer to Nonmember.

Dyke, Peter C., Birmingham, Alabama, Transfer to Nonmember.

Frink, Richard J., Sacramento, California, Moved from State.

Moody, Frank G., Birmingham, Alabama, Transfer to Nonmember.

AROUND THE STATE

Pittman, Constance S., Birmingham, Alabama, Transfer to Nonmember.

Toner, Stephen J., Shalimar, Florida, Moved from State.

Weaver, Jerome A., Mission, Kansas, Moved from State.

Wells, Clay N., Sullivan's Island, South Carolina, Moved from State.

Tuscaloosa County

Jordan, Otis L., Ft. Myers, Florida, Moved from State.

Van Tassel, Walter R., University, Alabama, Transfer to Nonmember.

Walker County

Dunham, William K., Jr., Jasper, Alabama, Transfer to Nonmember.

Olsen, Frank B., Coolidge, Arizona, Moved from State.

CHANGES OF ADDRESS

Coffee County

Cooper, Luther B., present Elba to Drawer C, Highland Drive, Elba, Alabama 36323.

Crook, Donald H., present Elba to P. O. Box 449, North Drayton Avenue, Elba, Alabama 36323.

Kimmey, John M., present Elba to 808 Putman Street, Drawer H, Elba, Alabama 36323.

Dallas County

Ross, James S., present Selma to 304 Sultan Court, Montgomery, Alabama 36109.

Houston County

Field, Mason D., Jr., present Dothan to 1507 West Main Street, Dothan, Alabama 36301.

Jefferson County

Harris, Samuel E., present Birmingham to 1509-A 8th Avenue North, Birmingham, Alabama 35203.

Ingle, Leo R., Jr., present New Orleans, La. to 5551 Rosemary Place, New Orleans, La. 70124.

Swan, John L., present Birmingham to 4341 Little River Road, Birmingham, Alabama 35213.

Marion County

Fuson, Edna P., present Winfield to 411 Gilmer, Tallassee Medical Clinic, P. A., Tallassee, Alabama 36078.

Mobile County

Cowden, Robert W., present Mobile to 107 Ryan Avenue, Mobile, Alabama 36607.

Montgomery County

Jackson, Benjamin F., Sr., present Montgomery to 690 Ponce De Leon, Montgomery, Alabama 36106.

Marshall, Wallace S., present Montgomery to 2326 Winchester Road, Montgomery, Alabama 36106.

Pike County

Sacks, Herman M., present Troy to P. O. Box 442, Troy, Alabama 36081.

Randolph County

Sasser, Ramon C., present Roanoke to 1325 South Military Street, Hamilton, Alabama 35570.

Talladega County

Rea, Robert C., present Sylacauga to 308 West Hickory Street, Sylacauga, Alabama 35150.

Walker County

Harp, Richard D., present Jasper to 201 East 18th Street, Jasper, Alabama 35501.

NEW TELEPHONE NUMBERS

Fuson, Edna P., Marion _____ 283-3585

Fuson, V. R., Marion _____ 283-3585

Goodall, H. M., Tuscaloosa _____ 752-7441

(Continued on Page 59)



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As an active, involved member, you can influence policy by making your views known to your delegates, both national and state. It is your democratic right — and responsibility.

Write your delegates, call them, see them. If they aren't responsive, tell them they'll be hearing from you at election time.

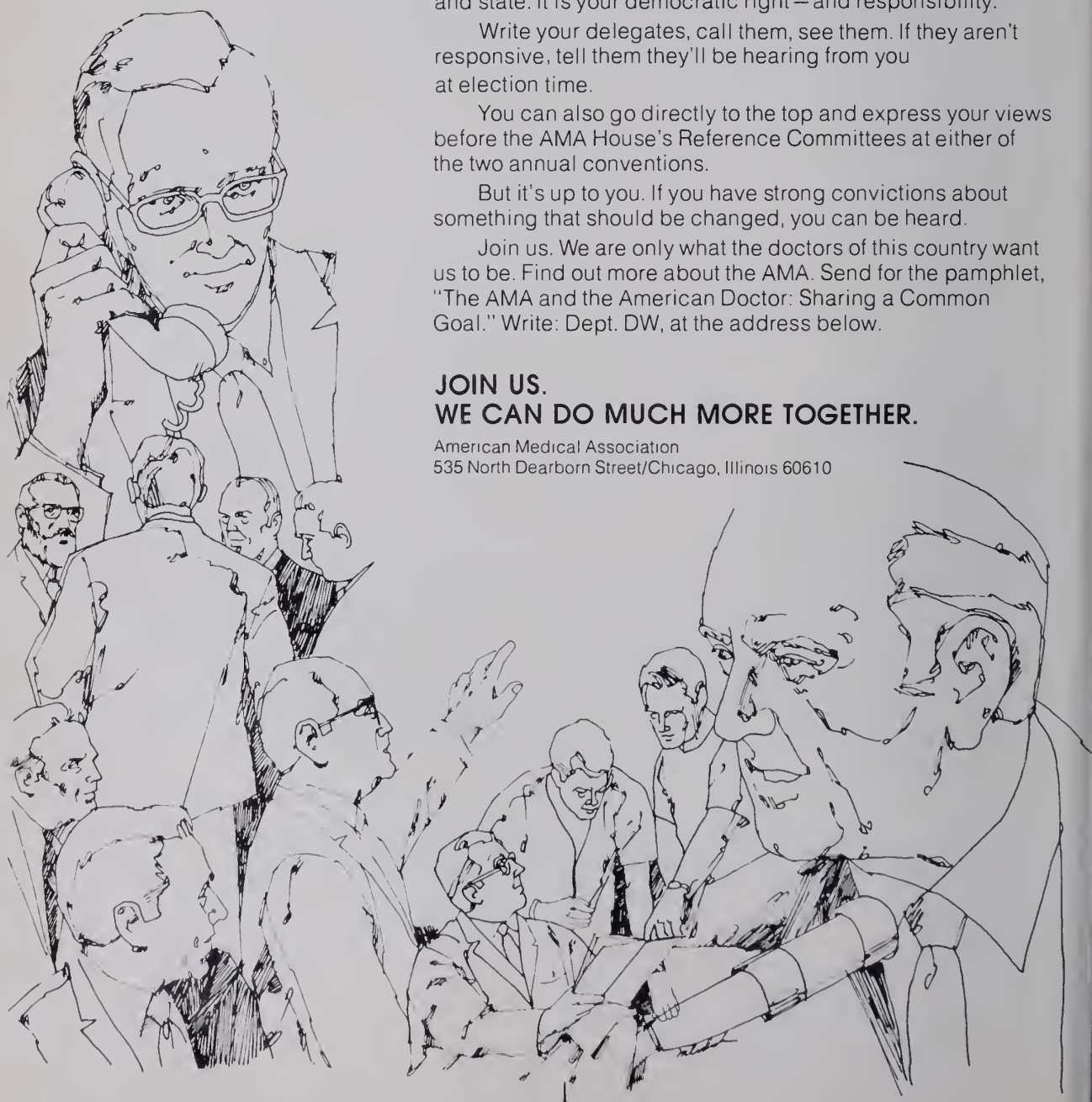
You can also go directly to the top and express your views before the AMA House's Reference Committees at either of the two annual conventions.

But it's up to you. If you have strong convictions about something that should be changed, you can be heard.

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WE CAN DO MUCH MORE TOGETHER.**

American Medical Association
535 North Dearborn Street/Chicago, Illinois 60610



AROUND THE STATE

(Continued from Page 56)

Hall, D. E., Elmore	283-6116
Kesmodel, K. F., Jr., Jefferson	933-8122
Mahoney, J. A., Baldwin	937-6733
Marshall, W. S., Montgomery	272-4976
Mullins, H. C., Jr., Baldwin	928-0310
Perry, W. J., Morgan	773-5931
Roberts, G. R., Elmore	283-6160
Sasser, R. C., Randolph	921-3153
Walsh, R. E., Lee	821-0460
Woddail, J. D., Marion	921-2186

The bug disease kills more people than any other disease in the world. It is very important, therefore, not to let anything bug you.

Arthur Logan, M. D.
Connecticut Medicine, Nov., 1971

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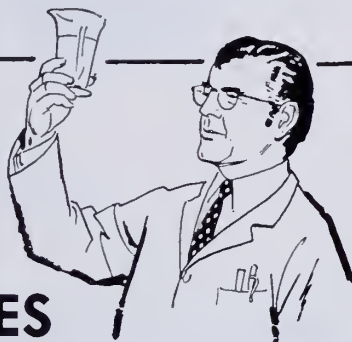
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An orally active hypoglycemic agent principally indicated in relatively mild, adult, maturity-onset, non-ketotic diabetes; also, as a supplement to insulin therapy in selected diabetic patients, it may effect a stabilization of labile diabetes and reduce insulin requirements. Certain patients intolerant to chlorpropamide therapy at usual therapeutic doses have subsequently been successfully managed with Orinase (tolbutamide).

Use in mild asymptomatic diabetic patients with abnormal glucose tolerance tests not responding to diet therapy may result in improvement of the glucose tolerance test.

Use in conjunction with phenformin is indicated when optimal control is not obtained with Orinase or phenformin alone.

Contraindications: Orinase alone is not effective in juvenile or growth-onset diabetes nor in unstable brittle diabetes where insulin therapy is required.

Orinase should not be used: when diabetes is complicated by acidosis, ketosis, or coma, or when a history of repeated bouts of acidosis or coma is obtained; in the presence of other acute complications such as fever, severe trauma, or infections; and in patients with severe renal insufficiency. Insulin is indicated in these circumstances.

Pregnancy Warning: The safety and usefulness of Orinase during pregnancy has not been established either from the standpoint of the mother or the fetus. Animal studies have demonstrated fetocidal and teratogenic effects of doses of 1,000-2,500 mg./kg./day, but application to human subjects unknown. Therefore, Orinase is not recommended for the pregnant diabetic, and when administering Orinase to women of childbearing age, these facts should be borne in mind.

Precautions: Diagnostic and therapeutic measures necessary for optimal control with insulin are also necessary with Orinase. The patient on Orinase must be fully instructed: about nature of his disease; how to prevent and detect complications; how to control his condition; not to neglect dietary restrictions; not to develop a careless attitude or disregard instructions relating to body weight, exercise, personal hygiene, and avoidance of infection; how to recognize and counteract impending hypoglycemia; how and when to test for glycosuria and ketonuria; when to use insulin; and to report to the physician immediately when he does not feel as well as usual.

Caution, very close observation, and careful adjustment of dose are necessary when: insulin is withdrawn during the period in order to avoid ketosis, acidosis, and coma; when diuretics are administered which may result in aggravation of diabetic state and increased tolbutamide requirement, thereby loss of control, or even secondary failure; treating patients with impaired hepatic and/or renal function and debilitated, malnourished, or semistarved patients in order to avoid severe hypoglycemia which may require corrective therapy over several days; and treating patients with severe trauma, infection, or surgical procedures where temporary return to insulin or additional insulin may be necessary. Response to tolbutamide is diminished in patients receiving therapy with beta blocking agents.

As some diabetics are not suitable candidates, it is essential that the physician familiarize himself with the indications, contraindications, dosage, and selection of patients for therapy.

Patients must be under continuous medical supervision during the initial test period should communicate with the physician.

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You also know the importance of close monitoring of the patient. Although uncommon, severe hypoglycemia may occur if the dosage is not tailored to suit his requirements.

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daily, and during the first month report at least once weekly. Physical examination and definitive evaluation. After a month, examinations are recommended monthly or as indicated. Appearance of ketonuria, increase in glycosuria, unsatisfactory clearing or persistent elevation of blood sugar, or failure to gain and hold clinical improvement indicate nonresponsiveness to Orinase (tolbutamide). Orinase does not obviate need for maintaining standard diet regulation. Uncooperative patients should be considered unsuitable for therapy. Prescriptions should be refilled only on specific instruction of physician. In treating asymptomatic diabetic patients with abnormal glucose tolerance, glucose tolerance tests should be obtained at three-month intervals. Orinase is not an oral insulin or a substitute for insulin and must not be used as sole therapy in juvenile diabetes or in diabetes complicated by acidosis or coma where insulin is indispensable.

phenformin is prescribed in combination with Orinase, appropriate package literature should be consulted.

Adverse Reactions: Severe hypoglycemia, though uncommon, may occur and may mimic acute neurologic disorders such as cerebral thrombosis. Certain factors such as hepatic and renal disease, malnutrition, advanced age, alcohol ingestion, and adrenal and pituitary insufficiency may predispose to hypoglycemia and certain drugs such as insulin, phenformin, sulfonamides, oxyphenbutazone, salicylates, probenecid, monamine oxidase inhibitors, phenylbutazone, bishydroxycoumarin, and pyrazinamide may prolong or enhance the action of Orinase and increase risk of hypoglycemia. Orinase long-term therapy has been reported to cause reduction in RAI uptake without pro-

ducing clinical hypothyroidism or thyroid enlargement and at high doses is mildly goitrogenic in animals. Photosensitivity reactions, disulfiram-like reactions after alcohol ingestion, and false-positive tests for urine albumin have been reported.

Although usually not serious, gastrointestinal disturbances (nausea, epigastric fullness, and heartburn) and headache appear to be dose related and frequently disappear with reduction of dose or administration with meals. Allergic skin reactions (pruritus, erythema, urticaria, and morbilliform or maculopapular eruptions) are transient, usually not serious, and frequently disappear with continued administration. Orinase should be discontinued if skin reactions persist. Recent reports indicate that long-term use of Orinase has no appreciable effect on body weight.

Orinase appears to be remarkably free from gross clinical toxicity: crystalluria or other renal abnormalities have not been observed; incidence of liver dysfunction is remarkably low and jaundice has been rare and cleared readily on discontinuation of drug (carcinoma of the pancreas or other biliary obstruction should be ruled out in persistent jaundice); leukopenia; agranulocytosis; thrombocytopenia; hemolytic anemia; aplastic anemia; pancytopenia; and hepatic porphyria and porphyria cutanea tarda have been reported.

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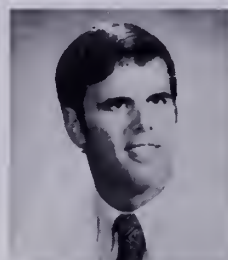
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Albertville



W. M. Armstrong
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Mobile



J. H. Bankston
Scottsboro



G. L. Beale, Jr.
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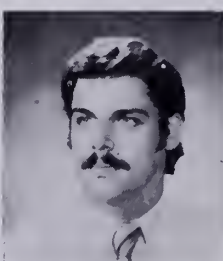
D. R. Cornelius
Huntsville



P. K. Bobo
Graysville



R. N. Bowman
Opp



T. A. Correll
Milwaukee, Wis.



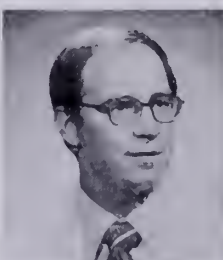
M. J. Cowley
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V. E. Bradley
Benton Harbor,
Mich.



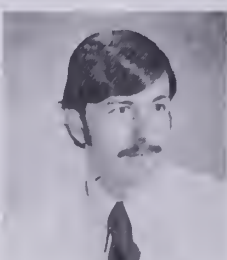
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Sumiton



L. W. Craddock
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(Continued on Page 64)

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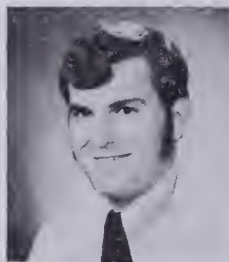
Dorothy R. Mooney
Administrator

Member Georgia Hospital Association

(Continued from Page 62)



G. J. Detko, Jr.
Huntsville



R. M. Doughton
Birmingham



T. A. Gillespie
Birmingham



W. G. Grubb
Dothan



R. M. Eager
Birmingham



T. H. Edwards, III
Birmingham



R. G. Hannah
Mobile

J. C. Harvey
Wilmington, Del.
(Picture not available)

(Continued on Page 66)



C. M. Eiland
Pensacola, Fla.



W. O. Fitzpatrick, III
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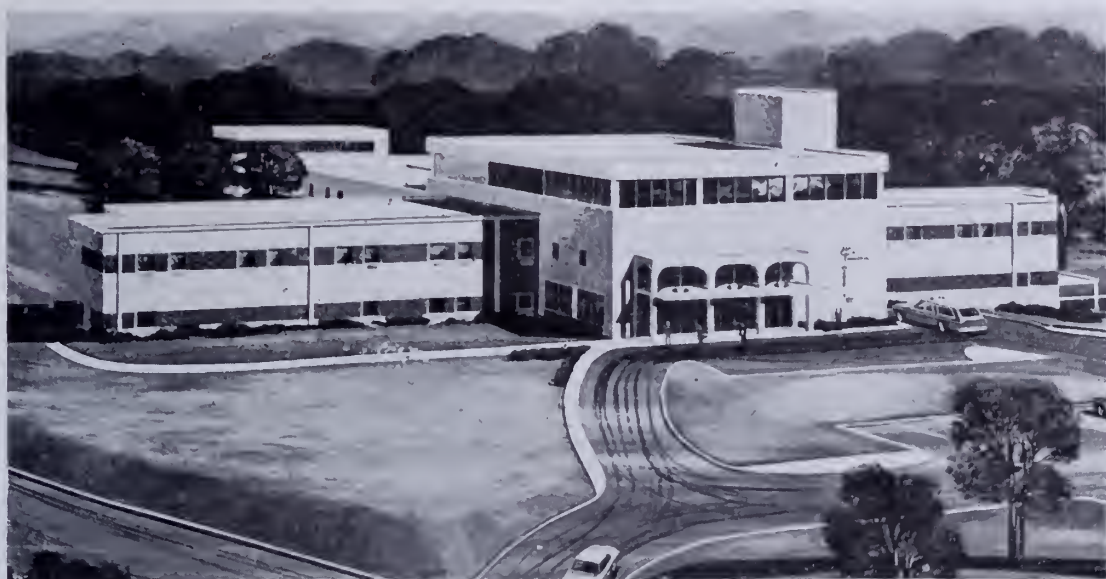
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F. Joseph Nuckols, M. D.
James A. Greene, M. D.
Charles W. Moorefield, M. D.

ADMINISTRATOR:

Robert V. Sanders

DIRECTOR OF SOCIAL SERVICES:

James T. Kemp, A. C. S. W.

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Hill Crest Foundation, Inc.

6869 Fifth Avenue South

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(Continued from Page 64)



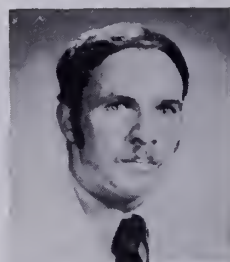
W. M. M. Haskell
Birmingham



D. G. Hawkins
Gadsden



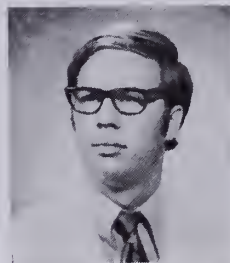
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Hayden



A. D. Jamieson
Florence



E. V. Hegg, Jr.
Birmingham



R. W. Henderson
Groveland, Fla.



J. T. Jones
Monroeville



J. B. Keeling
Gadsden



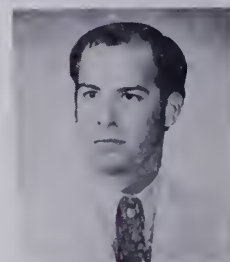
H. G. Herrod, III
Tuscaloosa



J. A. Higginbotham
Birmingham



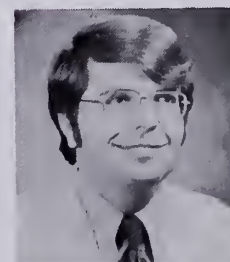
B. M. Key
Pennsylvania



J. D. Kirby
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C. E. Hollingsworth
Fayette



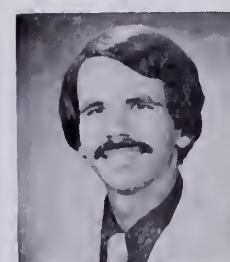
R. L. Hopkins
Homewood



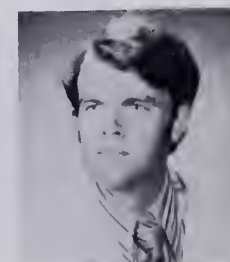
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Anniston



F. M. Lachina
Birmingham



W. F. Huggins, II
Cullman



J. E. Isbell
Cullman



S. K. Lochridge
Bexar



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Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

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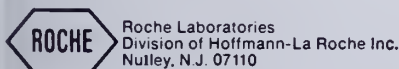
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unaltered by the drug. Use with caution in first trimester of pregnancy and in nursing mothers. Drug may appear in cord blood and breast milk. Serious, even fatal, blood dyscrasias, including aplastic anemia, may occur suddenly despite regular hemograms, and may become manifest days or weeks after cessation of drug. Any significant change in total white count, relative decrease in granulocytes, appearance of immature forms, or fall in hematocrit should signal immediate cessation of therapy and complete hematologic investigation. Unexplained bleeding involving CNS, adrenals, and G.I. tract has occurred. The drug may potentiate action of insulin, sulfonamides, and sulfonamide-type agents. Carefully observe patients taking these agents. Nontoxic and toxic goiters and myxedema have been reported (the drug reduces iodine uptake by the thyroid). Blurred vision can be a significant toxic symptom worthy of a complete ophthalmological examination. Swelling of ankles or face in patients under sixty may be prevented by reducing dosage. If edema occurs in patients over sixty, discontinue drug.

Precautions: The following should be accomplished at regular intervals: Careful detailed history for disease being treated and detection of earliest signs of adverse reactions; complete physical examination including check of patient's weight; complete weekly (especially for the aging) or an every two week blood check; pertinent laboratory studies. Caution patients about participating in activity requiring alertness and coordination, as driving a car, etc. Cases of leukemia have been reported in patients with a history of short- and long-term therapy. The majority of these patients were over forty. Remember that arthritic-type pains can be the presenting symptom of leukemia.

Adverse Reactions: This is a potent drug; its misuse can lead to serious results. Review detailed information before beginning therapy. Ulcerative esophagitis, acute and reactivated gastric and duodenal ulcer with perforation and hemorrhage, ulceration and perforation of large bowel, occult G.I. bleeding with anemia, gastritis, epigastric pain, hematemesis, dyspepsia, nausea, vomiting and diarrhea, abdominal

distention, agranulocytosis, aplastic anemia, hemolytic anemia, anemia due to blood loss including occult G.I. bleeding, thrombocytopenia, pancytopenia, leukopenia, leukopenia, bone marrow depression, sodium and chloride retention, water retention and edema, plasma dilution, respiratory alkalosis, metabolic acidosis, fatal and nonfatal hepatitis (cholestasis may or may not be prominent), petechiae, purpura without thrombocytopenia, toxic pruritus, erythema nodosum, erythema multiforme, Stevens-Johnson syndrome, Lyell's syndrome (toxic necrotizing epidermolysis), exfoliative dermatitis, serum sickness, hypersensitivity angitis (polyarteritis), anaphylactic shock, urticaria, arthralgia, fever, rashes (all allergic reactions require prompt and permanent withdrawal of the drug), proteinuria, hematuria, oliguria, anuria, renal failure with azotemia, glomerulonephritis, acute tubular necrosis, nephrotic syndrome, bilateral renal cortical necrosis, renal stones, ureteral obstruction with uric acid crystals due to uricosuric action of drug, impaired renal function, cardiac decompensation, hypertension, pericarditis, diffuse interstitial myocarditis with muscle necrosis, perivascular granulomata, aggravation of temporal arteritis in patients with polymyalgia rheumatica, optic neuritis, blurred vision, retinal hemorrhage, toxic amblyopia, retinal detachment, hearing loss, hyperglycemia, thyroid hyperplasia, toxic goiter (association of hyperthyroidism and hypothyroidism [causal relationship not established], agitation, confusional states, lethargy; CNS reactions associated with overdosage, including convulsions, euphoria, psychosis, depression, headaches, hallucinations, giddiness, vertigo, coma, hyperventilation, insomnia; ulcerative stomatitis, salivary gland enlargement. (B) 98-146-800-E

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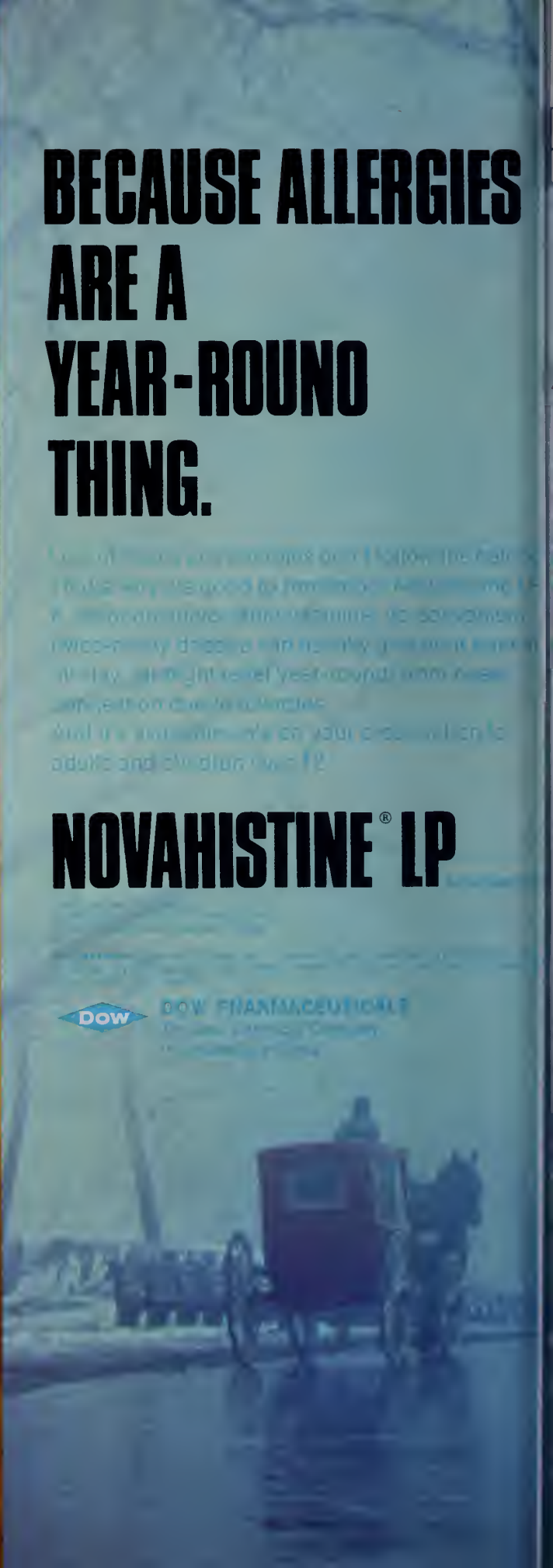
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President's Page

The Future Role of The Pharmacist

The general news media, the publications of nearly all of the allied health groups and many of medicine's publications are all "baying" to the cry of "The Comprehensive Health Care Team." All want a voice in medical management.

I am just suspicious and biased enough to believe that the prime objection of these allied health groups is for the enhancement of their image and status. Pharmacy is no exception. It is working diligently at the training and university level toward this end. Just as optometry has moved into our medical school complex in Alabama, pharmacy has moved into the medical schools of California and in the medical schools of several other states, so I am told. How can this benefit medicine, and more importantly, how can this be for the best interest of the public?

If you will read the following excerpt from an article by Robert H. Levin, Assistant Professor of Pharmacy, University of California School of Pharmacy, San Francisco, published in the May, 1971 issue of "Drug Intelligence and Clinical Pharmacy," you will know what pharmacy is attempting to do.

"The pharmacist hopes to span the bridge between the 'ivory tower' and the 'real world.' Emphasis is placed in the student applying his knowledge to patient's problems. The continuous challenge to the student forces him into a confident health-care team member who is not afraid to offer suggestions and constructive criticism to physi-



DR. PHILLIPPI

cians. Simultaneously, new physicians are taught to seek and accept pharmaceutical information from pharmacists. The medical student rapidly learns to gravitate toward the pharmacy students for accurate drug information rather than depending on biased sources.

"We hope to establish the role of the pharmacist as a direct contributor to patient care. The clinical pharmacist achieves these goals by influencing the selection of drug therapy in the initial phases of total care through direct consultation with the medical staff and the patient. The pharmacist provides a source of current, unbiased and relevant drug information."

A handwritten signature in dark ink, appearing to read "Frank M. Phillippi, Jr." The script is fluid and cursive, with the first name being the most prominent.

Frank M. Phillippi, Jr., M. D.

The Woman's Auxiliary

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AUXILIARY PLEDGE

"I pledge my loyalty and devotion to the Woman's Auxiliary to the American Medical Association. I will support its activities, protect its reputation and ever sustain its high ideals."

LEGS

The Woman's Auxiliary has come a long way in its political activities during the past 50 years. From the beginning, the leaders recognized the importance of working for good legislation. However, when the publicity committee was formed in 1925, the president of the American Medical Association stressed that Auxiliary members should avoid all activity where medical legislation was concerned. At the next annual meeting, the committee on legislation was renamed the committee on public relations, and the women were given another warning.

Doctors and their wives did not stay quiet on the political front very long. In the middle thirties, the government began talking about "sickness insurance" and articles appeared in leading magazines and newspapers advocating health care under the federal government. At this time, Auxiliary leaders urged members to keep informed on medical legislation and to be ready to help medical societies if called upon. In 1945 there was a big change when the AMA made an official request for the Auxiliary to use every avenue possible to bring information concerning hazards of current medical legislation to its members and through them to the public. From that time forward, legislation and politics have become more and more important in program planning.

The new legislative project for 1972-73 is LEGS (Legislative Effort Group System). This is just another way of increasing efforts in the legislative arena. With some form of National Health Insurance on the horizon, and debate on Peer Review and Health



MRS. HANSBERRY

Maintenance Organizations, doctors and their wives need to direct more of their attention to legislative matters. The Auxiliary already has a natural flow of activities, from the national legislation chairman, the regional chairmen, the state chairmen, and then to the county chairmen. Auxiliary members will become LEGS for medicine by carrying the message of quality health care for everyone. The kind of care that does not disturb the DOCTOR-PATIENT RELATIONSHIP.

LEGS will help every doctor's wife in the USA become more knowledgeable and concerned with political affairs. LEGS will carry medicine's message to Congressmen and their message to us. Each one of these

senators and representatives will need many LEGS to help with their campaigns. LEGS can write letters, visit, make phone calls, assist in getting absentee ballots, and help get the voters registered. The new LEGS KIT contains detailed "how to" materials. With the approval of the local medical society these Auxiliary LEGS can start running.

A. Rae Hansberry

A. Rae Hansberry
President

The Latest Technics And Developments In Nuclear Medicine

A one day seminar on the Latest Technics and Developments in Nuclear Medicine is being held September 22, 1972, at Self Memorial Hospital, Greenwood, S. C., under the direction of the Department of Radiology which has been actively engaged in a nuclear medicine program for the past 12 years. Several eminent physicians in this field from around the country will present lectures and practical demonstrations oriented in particular towards radiologists, internists and technologists engaged in this field. For interested general practitioners AAFP credits have been applied for and are expected. Registration fee is \$15.00.

The above program is sponsored by the South East Chapter of the Society of Nuclear Medicine, Department of Radiology of Self Memorial Hospital, The South Carolina Regional Medical Program and the Division of Continuing Education of the Medical University of South Carolina.

For further information and registration, please contact:

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Fathers and Sons in Medicine

Three Generations of Alabama M. D. VanSants



"MY THREE BOYS," 90-year-old widow of Dr. John William VanSant, might be saying as she poses with her hand on the portrait of her husband, and faces her son and grandson, Drs. Thomas Elzie VanSant, Sr. and Jr. At her back is the portrait of her grandson, who is still on active duty with the Army Medical Corps, holding the rank of Major. And at young Major VanSant's back is the portrait of the son, his father, Dr. Thomas E. VanSant, Sr. . . (Photograph courtesy of The Anniston Star).

The third generation of Doctors VanSant of Piedmont, Alabama is celebrating his 14th wedding anniversary this month in Honolulu, the principal city in our nation's 50th State.

His grandfather, the late John William VanSant, M. D., was born on Tuesday, 2 January 1877; was graduated from the Georgia School of Eclectic Medicine of Surgery at the age of 27 and, following a year's

postgraduate work, began the practice of medicine in Marshall County in 1906, in the town of Wellington, where the children were born.

While still a medical undergraduate, this senior of the VanSant trio was married to Miss Annie Belle Burns of Albertville, and two children: Thomas Elzie VanSant, now an M. D. in general practice in Piedmont, Calhoun County; and Willie Mae VanSant.

who is today Mrs. John H. Curtis of Memphis, Tennessee.

Dr. VanSant practiced medicine in Piedmont from 1909 to his death in October, 1950. His widow, Mrs. VanSant will celebrate her 91st birthday 19 January 1973, surrounded by her children, her grandchildren, and her great-grandchildren.

The second of this trio of doctors was born in Wellington, also on Tuesday, 12 September 1905, and was four years old when his family took him to Piedmont. Graduating from Piedmont High School, he took the first two years of his baccalaureate work at the University of Alabama, transferring to Birmingham-Southern, from where he was graduated with a B. S. degree. Receiving his M. D. from the University of Tennessee, Memphis, he interned at Hillman, Birmingham, and took his residency in surgery at Roanoke (Virginia) Memorial Hospital before entering private practice with his father, just past his 28th birthday.

The year following, this second of the VanSant doctors was married to a Virginian, Miss Grace V. Ramsey, and five years after that—on Sunday, 27 February 1938—Thomas E. VanSant, Jr., was born. He is an only child.

The middle one of the VanSant Physicians belongs to all the conventional professional associations, including AMA, AAGP, SMA, MASA, and the Calhoun County Medical Society, but also he has lived up to the fullest his civic, social, fraternal and religious responsibilities: a city councilman for four years, president of the P-T A and member of the school board; president and charter member, Piedmont Lions Club; commander, American Legion Post #98; chairman, Administrative Board, First United Methodist Church; Mason, Shriner, and active in Boy Scout and Cub Scout work. He has filled all the medical staff offices at Piedmont Hospital and five years after his father's death in 1950 built a clinic.

Thomas Elzie VanSant, Jr., was 18 when

(Continued on Page 80)

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he was graduated from Piedmont High School as Valadictorian of his class. After going to the University of Virginia for his first year of college, he transferred to the University of Alabama for his baccalaureate, received in 1960. Four years later he earned his M. D. degree from the University of Tennessee, subsequently interning at Georgia Baptist Hospital, Atlanta.

In 1966 the youngest of this trio of doctors entered the Army Medical Corps, serving in turn at Fort Gordon, Georgia; Thailand; Fort Benning, Georgia; Brooke General Hospital, Fort Sam Houston, Texas; and this month, August, began a three-year tour of duty at Tripler Army Hospital, Honolulu.

The junior Dr. VanSant was married on 30 August 1959 to a childhood sweetheart,

Miss Kay Cunningham of Piedmont, and there are two children, Karen Elizabeth, who is celebrating her 11th birthday this month in Hawaii, and Thomas E. VanSant III, who will be 8 in November and—who knows?—may become the fourth successive wearer of a fine name to earn an M. D. degree and enter the practice of a proud profession. The head of the military wing of this family today wears the golden oak leaves of a major on his collar.

For those interested in the derivation of names, the "Van" in this name is the Dutch form of "Von," a title of nobility; Sant means Saint. So translated into English, the form might be "Sir Saint."

W. J. Mahoney, Jr.

JAMA Calls For Delay In Test-Tube Baby Implants

A moratorium should be declared on any further experiments to implant a "test-tube baby" into a woman's womb, an editorial urged today in the current issue of the *Journal of the American Medical Association*.

Representatives of various disciplines should assemble to discuss the ethical considerations of such procedures as the growth and implantation of fertilized eggs outside the body (the "test-tube baby") and cloning, an asexual method of reproduction that would produce children genetically identical to their parent, the editorial urged.

The matter is particularly urgent since fertilized eggs have already been grown outside the body and some researchers are talking about implanting these "test-tube babies" in humans on a trial-and-error basis. This would make it possible for a woman otherwise unable to conceive to become a mother.

Human trials of cloning, on the other hand, do not seem imminent.

The editorial expressed the viewpoints of authorities for and against further experimentation in these areas.

On the pro side, proponents have defended the propriety of cloning and stated that the production of test-tube babies is fully justified for the purposes of fulfilling an unfertile woman's desire to deliver her own child.

On the con side, those who disagree have called the implantation of test-tube babies unethical experimentation on future possible human beings. They have even questioned if it is the proper goal of medicine to enable women to have children by any means—means which may bring hazard from the procedure, or additional hazard upon the child not yet conceived.

Warren Court Praised

"Equal Justice (The Warren Era of the Supreme Court)" is a book that could properly carry only one byline—Arthur J. Goldberg, onetime Associate Justice, onetime U. S. Secretary of Labor, onetime United States Ambassador to the United Nations, and currently apologist for the immediate past.

In his preface to the three theses that compose this book, Mr. Goldberg's reference to "our great experiment," has nothing to do with Herbert Hoover's commentary on prohibition, but rather on the Supreme Court's "great experiment in nation-making."

Throughout his 117-page volume, which is published by The Noonday Press of New York, priced at \$1.95, one is reminded of a generally forgotten quote from former Chief Justice Charles Evans Hughes, made 65 years ago:—"We are under a Constitution, but the Constitution is what the judges say it is."

—WJMJr.

An M. D. On Jogging

The M. D. who started the nation jogging with two books on "Aerobics" co-authors with his wife a 160-page volume titled "Aerobics for Women." All three books were published under the imprint of M. Evans of New York, distributed by Lippincott.

The M. D. is Kenneth H. Cooper, who as an Air Force medical officer wrote his first book on the exercise-dietary system for men in the Air Force while he was stationed at Maxwell Air Force Base, Montgomery. His wife Mildred, the mother of two small children, today jogs every morning at six o'clock with a faithful group of Dallas women and lectures extensively on the benefits of aerobic exercise.

The current volume contains 16 chapters, beginning with "One Woman's Liberation—From Fat, Fatigue and Apathy," and ending with "Vigorous, Virtuous, Victorious and (Why Not?) Vainglorious." It is priced at \$5.95.

—M.



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No man is really happy or safe without a hobby, and it makes precious little difference what the outside interest may be—botany, beetles or butterflies, roses, tulips or irises; fishing, mountaineering or antiquities—anything will do so long as he straddles a hobby and rides it hard.

—Sir William Osler, 1909

Gold Treatment Urged For Incurable Fever

A fever that no aspirin will break, no medication cure, has attacked two Montgomery physicians.

Known well to history, it became epidemic several times in the 19th century—once to such an extent that every victim was known by the year it occurred, as a “Forty-Niner.”

A sign reading: “This Way to Gold Mine—No Trespassing” was the culprit that first infected Drs. Paul Mertins and Karl Benkwith, on a Lake Martin outing. Within hours, ignoring the last two words of the sign, these two returned to the scene armed with picks, shovels, ropes and all available family frying pans.

One plunged promptly into the depths of a dark, dank hole in the mountain, disturbing several bats. The other flew to the edge of a mountain creek below the mine, armed with a frying pan. Between them, in a pleasingly short time, they’d accumulated a bucket full of glittering wealth. But, alas—as Shakespeare once said: “All that glisters is not gold.” Some of it is “fool’s gold,” mostly mica, and that is what they had.

But here were two physicians, caught by the fever, who were not easily discouraged. They invaded libraries and launched a research program that, for a two-man operation would have done justice to the Manhattan Project.

They gathered vast historical information:

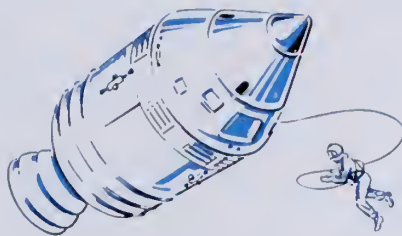


TWO INTREPID MINERS LOOK FOR GOLD

such as, that this area was where gold was first discovered in America; that Arbacoochee and Goldville in 1830 were the two largest cities in Alabama, with respective populations of 6,000 and 4,000; that here was where DeSoto in 1514 built a fort (remnants of which still remain), a century before the widely publicized Pilgrim Fathers ventured onto the Atlantic in the Mayflower. Indian arrowheads and artifacts were everywhere, and some of what they found was dated by “Carbon 14 decay” as around the time of Christ. There were maps too.

But no guidelines on how to obtain and cart off the gold. It looked like the miners of long ago were too cagy to share their secret.

They located, after diligent search, a couple
(Continued on Page 84)



Man in space, now fait accompli, re-emphasizes the importance of Uro-Phosphate therapy. Research into the effect of space travel on the astronaut reveals that weightlessness causes loss of bone calcium. As the bones are required to bear less and less of the weight of the body they lose calcium, increasing the calcium content of the urine. When physical activity is reduced, the acidity of the urine should be adjusted to keep increased calcium in solution . . . a prophylaxis to prevent kidney or bladder calculi.

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complete voiding and lessens frequency when residual urine is present.

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Uro-Phosphate is safe for continuous use. There are no contra-indications other than acidosis. It can be given in sufficient amount to keep the urine clear, acid and sterile. A heavy sugar coating protects its potency.

Dosage:

For protection of the inactive patient 1 or 2 tablets every 4 to 6 hours is usually sufficient to keep the urine clear, acid and sterile.

2 tablets at retiring will keep residual urine acid and sterile, contributing to comfort and rest.

A clinical supply will be sent to physicians and hospitals on request.



WILLIAM P. POYTHRESS & COMPANY, INC., RICHMOND, VIRGINIA 23217

Manufacturers of Ethical Pharmaceuticals

(Continued from Page 82)

of pseudo-experts and one actual miner. One told them that no pan ever used as a cooking vessel could catch gold. The precious metal avoided it. Another told them that mercury or cyanide were the secret tools in processing gold, but that the process belonged exclusively to Uncle Sam, who objected much more to theft of this process than to heroin smuggling or plane hijacking.

Defying this prohibition, they experimented dangerously with the content of thermometers, but their efforts were rewarded only with noxious fumes, precarious threats to family health, the possible sacrifice of uncounted fish, and sleepless nights brought on by uneasy conscience.

The double life of these two doctors had reached unrewarded depths when they discovered gold! From the exact spot where they always began their panning, sifting, sluicing operation, there came several tiny gold nuggets. Momentarily they were jubilant. Then, the more they looked over their finds, the more these finds resembled the fillings of dental cavities! A dentist they knew, with what they now describe as "a crude sense of humor," had "salted" the area.

This doctor mining team is probably the most promising mining two one could imagine.

One—Paul Stahl Mertins, Jr.—was born in Montgomery, in the outskirts of America's first goldfield. The other—Karl Burton Benkwith, born in the city of Irondequoit on the shores of Lake Ontario, ultimately found his way to Montgomery via medical college in Oregon and, subsequently, the lead, zinc and silver mines of northern Idaho, where he practiced under contract. His year of practice took him into these mines, including the one with the tragic fire of three months ago.

Idaho may have offered little in the way of mining knowledge to guide young Dr. Benkwith in later gold digging, but it offered him an opportunity to meet Janet Sanders, a native of North Dakota. They were married and moved to Montgomery. There are three children: Karl, Jr., a Ph. D. now teaching Entomology at LSU; Sanders, now in his fourth year of medicine at the University of Alabama; and Jan, presently at Converse, a biology major aiming for a career in dentistry.

Dr. Mertins, from the "Cradle of the Confederacy," went to Barnes School first, then to Washington and Lee for his baccalaureate, to Columbia College of Physicians and Surgeons for his M. D. Married to the former Ann Moss of Birmingham, there are five children: Ann (Mertins) McDow, whose navy-officer husband is presently teaching at Annapolis; Ellen Leslie, with the historical commission in Montgomery; Majorie Moss, known to her intimates as "Temus," currently attending dramatic school in New York; Paul Scott, now in Auburn's School of Architecture; and Lee Holsey, graduate of the Montgomery Academy and Jefferson Davis, who expects to go on to the University of the South, Sewanee.

Meantime, don't ask this mining team how much gold they have harvested from Mother Nature. That's their trade secret.

But one might remember that all the mined gold in the world approximates \$100 billion, of which more than half is in private hands (according to a recent issue of U. S. News and World Report), and consists "of jewelry, art objects, the inventories of gold owned by artisans and manufacturers, plus coins and bars held by hoarders."

And out of that \$52 billion, maybe this vacationing team of medicos have accumulated enough for a modest tie-tack.

—W. J. MAHONEY, JR.

Anatomy of a Doctor.

You know what it takes to make a doctor. The motivation. The years of study and training. The dedication. The hard work.

But from the criticism leveled at doctors lately you'd think neither the public nor press had any idea.

It may surprise you, but the public does.

This was evidenced in a recent Harris Poll. In measuring public respect for U.S. leadership, it showed a drastic drop in the past five years. And "a majority of Americans is currently willing to express a 'great deal of confidence' in only one profession—medicine—on a list covering 16 types of activity." And that list included Congress and the Supreme Court.

People still look at their doctors as men to be respected and as men of integrity.

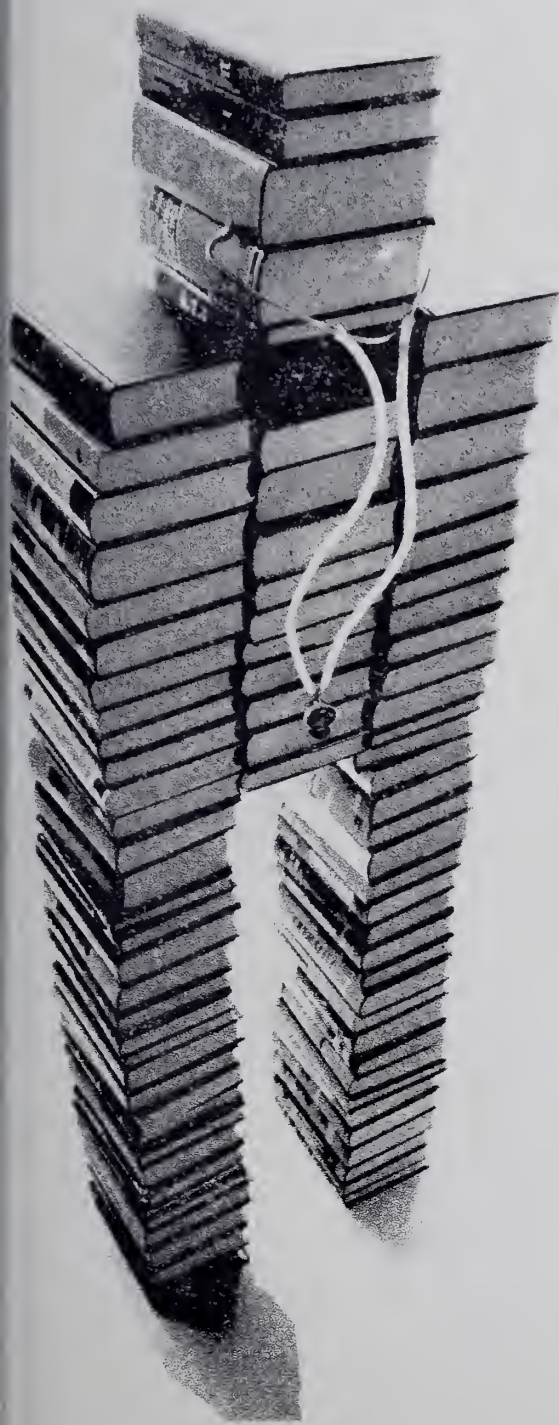
This is the true story of the American doctor. And one which the AMA is constantly telling the public as part of its communications program.

In newspapers and magazines, the AMA tells what it takes to be a doctor. American medicine's achievements. And to express the profession's concern by providing information to help every American lead a healthier life.

We can be an even more effective spokesman...with your support. Find out more about what the AMA does for you and the public. Send for a free pamphlet. Write: Dept. DW, at the address below.

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sixty per cent over its normal size...
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in place and preventing capture.

What it means to live and work in Tipton County, Tennessee

**Persons who are white and
over 40 have one chance in four
of having solar keratoses...
which may be premalignant**

An epidemiologic study* conducted in Tipton County, Tennessee, revealed that 28.5% of white persons over 40 had solar keratoses; most had multiple lesions. Cluster sampling projected an estimated prevalence of 32.5% for white males and 19.5% for white females.

Though this is an unusually high percentage of affected persons, these lesions can occur in any white population, wherever people work or play out of doors.

**Prevalence of solar keratoses in white persons
over 40 in Tipton County, Tennessee**

Female	159	44
Male	117	66



Persons without solar keratoses



Persons with solar keratoses

*Data on file, Hoffmann-La Roche Inc., Nutley, New Jersey.



Solar, actinic, senile keratoses

led by many names, the typical lesion is flat or slightly elevated, brownish or reddish in color, papular, dry, adherent, rough, sharply demarcated; usually multiple lesions, chiefly on exposed portions of the skin.

Sequence/selectivity of response

Erythema in areas of lesions may begin after several days of therapy; height of reaction (erythema in affected areas)* usually occurs within 1-2 weeks, declining after discontinuation of therapy. Since this response is so predictable, lesions that do not respond should be biopsied to rule out the presence of a frank neoplasm.

Cosmetic results

Cosmetic results are highly favorable. Incidence of scarring is low—important with multiple facial lesions. Efudex should be applied with care near the eyes, nose and mouth.

5% cream—a Roche exclusive

Only Roche formulates the 5% cream... contributing to patient acceptability... high in clinical efficacy, especially for lesions of hands and arms... economical.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Multiple actinic or solar keratoses.

Contraindications: Patients with known hypersensitivity to any of its components.

Warnings: If occlusive dressing used, may increase inflammatory reactions in adjacent normal skin. Avoid prolonged exposure to ultraviolet rays. Safe use in pregnancy not established.

Precautions: If applied with fingers, wash hands immediately. Apply with care near eyes, nose and mouth. Lesions failing to respond or recurring should be biopsied.

Adverse Reactions: Local—pain, pruritus, hyperpigmentation and burning at application site most frequent; also dermatitis, scarring, soreness and tenderness. Also reported—insomnia, stomatitis, suppuration, scaling, swelling, irritability, medicinal taste, photosensitivity, lacrimation, leukocytosis, thrombocytopenia, toxic granulation and eosinophilia.

Dosage and Administration: Apply sufficient quantity to cover lesion twice daily with nonmetal applicator or suitable glove. Usual duration of therapy is 2 to 4 weeks.

How Supplied: Solution, 10-ml drop dispensers—containing 2% or 5% fluorouracil on a weight/weight basis, compounded with propylene glycol, tris(hydroxymethyl)amino-methane, hydroxypropyl cellulose, parabens (methyl and propyl) and disodium edetate.

Cream, 25-Gm tubes—containing 5% fluorouracil in a vanishing cream base consisting of white petrolatum, stearyl alcohol, propylene glycol, polysorbate 60 and parabens (methyl and propyl).

an alternative to conventional therapy **Efudex[®]** (fluorouracil) cream/solution



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Imported From Sicily

"Mafia Staff Car—Hands Off" reads a recent bumper sticker. In a single two-month span Bantam Books, Inc., publishes five books related to the subject which has been challenging politics and the war for front-page position.

"From Caesar to the Mafia" is an engaging series of essays by Luigi Barzini, hailed as "a most disconcerting and brilliant journalist."

Two are the life stories of Mafia molls:—"My Face for the World to See," the astonishing autobiography of Liz Renay, who was one of them; and "The Mistress and the Mafia," the life and loves of Virginia Hill,

native of Alabama and the underworld's greatest beauty.

And two in which the name Mafia isn't mentioned, though it is there none the less:

"The Name Above the Title," by Frank Capra, a dirt-poor Sicilian immigrant boy who became perhaps the most successful Hollywood director of his time, a definitive 576-page book, and "Overcoming Drugs," a program for action, by Donald B. Louria, M. D., his third book on the subject of illicit drug use in the last five years, a positive approach to dealing with the problem.

—M.

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"The history of science, and in particular the history of medicine...is... the history of man's reactions to the truth, the history of the gradual revelation of truth, the history of the gradual liberation of our minds from darkness and prejudice."

— George Sarton, from "The History of Medicine Versus the History of Art"

**Would it be useful
in clinical practice to have
government predetermine
drugs of choice?**

Opinion

Results of a survey of physicians:

13.3%

Yes, it would be useful.

86.7%

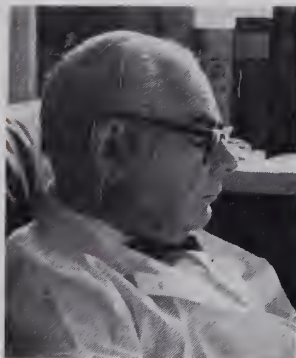
No, it would not be useful.

Dialogue

Would it be useful in clinical practice to have government predetermine drugs of choice?

Doctor of Medicine

Walter Modell, M.D.,
Professor of Pharmacology,
Cornell University
Medical College,
Editor,
Clinical Pharmacology
& Therapeutics,
Drugs of Choice,
Rational Drug Therapy



The proposition that government should determine one or two "drugs of choice" within a given therapeutic class reflects the belief that a similarity in molecular structure insures a close similarity in pharmacologic effect. But this is by no means the rule. An obvious example would be in the field of diuretics, where a small change in chemical structure accounts for substantial dif-

ferences in concomitant effects such as potassium excretion.

Any attempt to dictate the "drug of choice" would be complicated by the fact that some populations demonstrate a bimodal distribution in their reaction to drugs. If the data on drug response are mixed for the total population, one drug will appear to be as useful as the other. But if drug response is reported separately for different segments of the population, drug A will be found to be better for one group and drug B for the other.

It may, of course, be possible to determine drugs of choice in particular categories on a broad statistical basis. But there are always certain patients in whom a drug produces odd, unpredictable or idiosyncratic reactions. So, though a drug might statistically be the most useful one in a given situation, individual variations in response might make it the *incorrect* one.

The point I wish to make is that if two, three, four or more drugs in one class are of approximately equal merit, that in itself is justification for their availability. Exceptional cases do arise in which one drug would be useful to a certain

segment of the population and another drug would be of no use at all. In the practice of medicine, the physician must be prepared to treat the routine as well as the unusual case.

Another objection to the determination of a drug of choice is that precise statements of *relative* efficacy are very difficult to make—much more difficult than statements of efficacy. For example, in testing drug efficacy, it is easy to determine the difference between a drug that is effective in treating a condition and one that is not at all effective. Thus, it is fairly easy to determine whether a drug is more effective than a placebo. But if you compare one drug that is effective with another drug that is also effective, and the relative differences between them are very slight, statements of relative efficacy may be very difficult to make with assurance.

I do not mean to imply that relative efficacy statements are not useful or can never be made. With some groups of drugs (e.g., analgesics), extensive study and precise methodology have yielded useful information on relative efficacy. But in most situations, such information can be acquired only through studies encompassing three to five years of use in many more patients than are used to compare drugs with a placebo for the introduction of a drug into commerce. It is really only after practitioners use a drug extensively that relative safety and efficacy

in practice can really be determined.

The Bureau of Drugs suggested the package insert as a possible means of communicating information on relative efficacy of drugs to the physician. I find this objectionable, since I do not believe the physician should have to rely on this source for final scientific truth. There is also a practical objection: Since physicians actually dispense drugs, they seldom see the package insert. In any event, I would maintain that the physician should know what drug he wants and why without depending on the government or the manufacturer to him.

Undoubtedly, physicians are swamped by excess numbers of drugs in so many therapeutic categories. But I am well aware that many drugs within such categories could be eliminated without any loss, or perhaps even some profit, to the practice of medicine. But, in my opinion, neither the FDA nor any other single group has the expertise and the wisdom necessary to determine the "drug of choice" in most areas of medical practice.

Maker of Medicine

Nath G. Kohlstaedt, M.D.,
Vice President,
Medical Research,
Eli Lilly and Company



In my opinion, it is not the function of any government or private regulatory agency to designate a "drug of choice." This determination should be made by the physician after he has received full information on the properties of a drug, and then it will be based on experience with this drug and his knowledge of the individual patient who is seeking treatment. An evaluation of comparative efficacy were to be made, particularly by government, at the time a new drug is being approved for marketing, it would be a disservice to medicine and thus to the patient and consumer. For example, when a new therapeutic agent is introduced, on the basis of limited knowledge, it may be considered to be more potent, more effective, or safer than products already on the market. Conceivably, at the time the new drug would be labeled "the drug of choice." But as additional clinical experience is accumulated, new evidence may become available. If, then, it may be apparent

that the established products should not be so easily dismissed.

Variation in patient response to drugs constitutes one of the major obstacles to the determination of "drugs of choice." We are just beginning to open the door on pharmacogenetics, but it is evident that genetic differences cause wide variations in the way drugs are absorbed, metabolized, etc. This fact alone is sufficient to make unrealistic the idea that there is one drug in each class to be used for every human being.

The problem of determining relative drug efficacy is an extremely complicated one. Comparison with other drugs of the same class should not be a prerequisite for marketing a new substance. In some therapeutic areas, it may be difficult to make accurate comparisons. For example, in the treatment of infections it is not possible to conduct crossover studies. Recovery may be influenced by factors which cannot be controlled or measured, i.e., natural host resistance and virulence of infective agents. A drug's acceptability must often be judged on the basis of its own performance, and this may be limited to experience in a relatively small patient population. If the introduction of a new drug must await the adequate establishment of relative efficacy, the duration of clinical trial and extent of studies would be greatly prolonged, particularly for rare or unusual conditions. The availability of a new drug would be delayed. Many patients might suffer needlessly and lives might be lost.

Relative efficacy can best be established by experience in a general patient population through regular channels of clinical practice. The physician considers the patient as a whole, which means the patient often has multiple problems and drugs must be selected with this in mind. Hence, a "drug of choice" in an uncomplicated case may not be the best drug for a patient with associated problems. Publication of well-controlled studies in medical journals may provide comparative evidence; discussions at medical meetings, presentations at postgraduate courses, and the new audiovisual technology may bring evidence to physicians on comparative therapy. In a free medical marketplace, a drug that does not measure up will fall into disuse. For example, broad clinical experience has established vitamin B₁₂ as the "drug of choice" for the treatment of primary pernicious anemia. No amount of advertising or promotional effort by the manufacturer could increase the use of liver extract for this anemia. How-

ever, a physician may wish to employ parenteral liver preparations for a special purpose.

In the field of surgery, peer review in the hospital has brought significant improvement in the use of new techniques and procedures. Something of this nature would be useful in the area of drug therapy. However, it should be developed by the medical profession itself and would necessitate, for its proper function, an improvement in the dissemination of reliable data on clinical pharmacology of drugs under consideration.

Ideally, information on the relative efficacy of drugs should be gathered and assessed by the physicians who actually administer the specific agents to a specific patient population. To do this, they will need even more information on the drugs they use — information that the pharmaceutical manufacturers must begin to provide if government regulation of "drugs of choice" is to be avoided.

Opinion & Dialogue

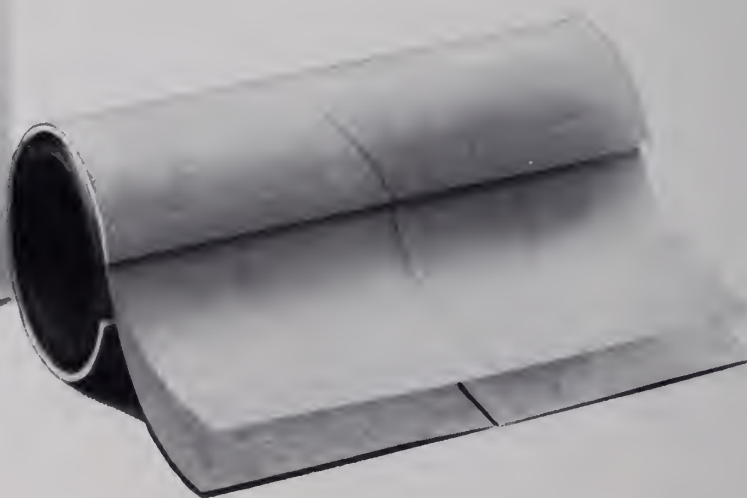
What is your opinion, doctor?

Send us your comments on the above issue.



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Motorcycle Accidents In Auburn-Opelika, Alabama, 1969-1971

Ronald W. Hillyer, B. S.*, William A. Webb, M. D., James C. Thoroughman,
M. D., William D. Lazenby, M. D., C. Doyle Haynes, M. D.,
Raymond D. Godsil, Jr., M. D., Auburn-Opelika, Alabama.

The popularity and growth of the motorcycle industry since 1960 has been amazing. (Table 1)¹ Many factors are responsible for this growth. A good motorcycle at a lower cost was introduced about 1963 by the Japanese; the economy has been booming; the public has more leisure time; with crowded highways, cities and campuses the smaller motorcycles have become a cheaper and frequently a more convenient means of transportation; and motorcycle riding has become an accepted if not "fashionable" pastime. Movies, such as *Easy Rider*, *On Any Sunday*, and *C. C. and Company* have promoted the image of the cyclist.

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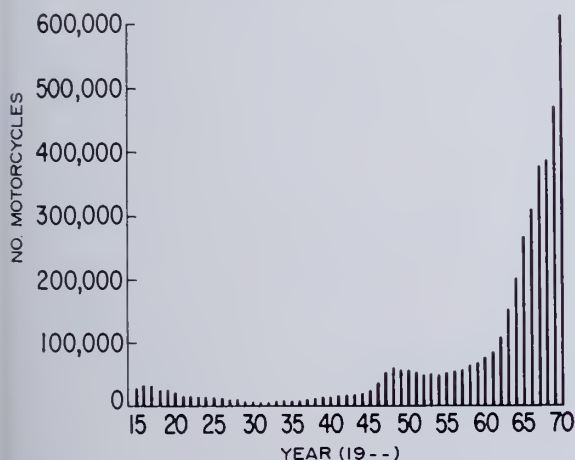


TABLE 1

*Freshman medical student, University of Alabama School of Medicine. Summer extern, Lee County Hospital, 1971. From the Surgical Section, Medical Arts Center of Southeast Alabama.

The economic impact of the motorcycle industry has recently been summarized in a compendium concerning the state of California for 1970. Motorcycle advertising relating to that state alone totaled 3.6 million dollars. Motorcycle sales and parts grossed 131 million dollars. Total revenue from motorcycle sales, parts, and accessories was 350 million dollars. The dollar value of the motorcycle to the nation was a staggering one and a quarter billion dollars in 1970.²

Table 2 shows the increase in motorcycle sales from 575,497 in 1960 to 2,500,000 in 1970. The large yearly percentage gain can also be seen as opposed to the only moderate increase for other motor vehicles.³ The popularity of the motorcycle as a means of transportation on university campuses is reflected in the registration figures of the University of Michigan from 1960 to 1966 where registration went from 203 motorcycles in 1960 to 1,247 in 1966. (Table 3)⁴

Unfortunately, the popularity of the motorcycle has brought about problems as well as pleasures and economic gain. The accident rate has paralleled the growth, and it has become known as the "boom and doom" and the "buy and die" industry. The total number of fatalities in all motor vehicle accidents has risen in ten of the past 12 years. One exception was 1967 and the other was 1970. While all other motor vehicle deaths decreased by 2.1 per cent in

MOTORCYCLE ACCIDENTS

Table 2

MOTORCYCLE* AND TOTAL MOTOR-VEHICLE DATA, 1960-1970

Year	Vehicles				Deaths			
	Motorcycles		Total Mot. Veh.		Motorcycle Riders		All Mot. Veh. Occupants	
	No.	Yearly % Change	No.	Yearly % Change	No.	Yearly % Change	No.	Yearly % Change
1960	575,497		74,500,000		731		29,750	
1961	595,669	+ 3.5	76,400,000	+2.6	697	- 4.7	29,850	+0.3
1962	660,400	+10.9	79,700,000	+4.3	759	+ 8.9	32,300	+8.2
1963	786,318	+19.1	83,500,000	+4.8	882	+16.2	34,700	+7.4
1964	984,763	+25.2	87,300,000	+4.6	1,118	+26.8	37,900	+9.2
1965	1,381,956	+40.3	91,800,000	+5.2	1,515	+35.5	39,450	+4.1
1966	1,752,801	+26.8	95,900,000	+4.5	2,043	+34.9	42,800	+8.5
1967	1,953,022	+11.4	98,900,000	+3.1	1,971	- 3.5	42,700	-0.2
1968	2,100,547	+ 7.6	103,100,000	+4.2	1,900	- 3.6	44,500	+4.2
1969	2,255,470	+ 7.4	107,000,000	+3.8	1,960	+ 3.2	45,700	+2.7
1970	2,514,450	+11.5	111,500,000	+3.5	2,330	+18.9	43,500	-3.8

*Includes motor scooter, motorized bicycles, and motorized tricycle.

MOTORCYCLE REGISTRATION

Year	University of Michigan	Yearly % Change
1960	203	
1961	347	+71
1962	425	+22.5
1963	534	+25.6
1964	800	+49.8
1965	1,374	+71.8
1966	1,247	- 9.2

TABLE 3

1970, motorcycle deaths increased by 19 per cent. The motorcycle death rate had decreased in 1967 and 1968, most likely due to mandatory safety precautions (i.e., crash helmets).⁵ The State of Alabama Department of Public Safety recently released statistics for rural motorcycle accidents from 1961 to 1970. There were 65 accidents, 42 injuries and eight fatalities in 1961 as opposed to 330 accidents, 234 injuries and 25 fatalities in 1970.⁶ Another method of evaluating the problem is a comparison of the death rate per 100,000,000 miles traveled. The overall vehicle death rate was 4.9 while the motorcycle rider death rate was a staggering 23.0.⁷ No statistics are available for non-fatal injuries.

Because of the large number and the severity of motorcycle injuries seen by the authors in the emergency room of Lee County Hospital, we decided to review our experience with them.

Local Accident Survey

Lee County, Alabama, is serviced by a 120 bed county hospital. The 1971 county census was 61,268. Most of the population resides in the twin cities of Auburn with 22,767 (location of Auburn University) and Opelika with 19,027. The exact number of motorcycles registered in the county is misleading because many students register their motorcycles in their home counties. Lee County had 763 motorcycles registered in 1970 and 816 registered in 1971. Auburn University had only 200 motorcycles registered for 15,000 students in 1971.

Two consecutive 12 month periods from September 1, 1969, to August 31, 1971, were reviewed for motorcycle injuries and fatalities. The year 1960 was also reviewed to compare the increase of accidents since that year. Table 4 shows that ten injuries were treated in 1960, 43 in 1970, and 66 in 1971. There were two hospitalizations in 1960, 13 in 1970, and 16 in 1971. The only two fatalities occurred in 1971.

One of the reasons for this survey was our concern for the number of teenagers in-

MOTORCYCLE ACCIDENTS

MOTORCYCLE INJURIES LEE COUNTY 1969-1970

Year	1960	1969-1970	1970-1971	TOTAL
Injuries	10	43	66	109
Hospitalized	2	13	16	29
Fatalities	0	0	2	2

TABLE 4

involved in these accidents. This is born out by the age statistics. (Table 5) The age range was 4-51 years. The average age was 20.8 years and the most frequent age involved (mode) was 16 years. The average age for hospitalization was 20.0 years and again the mode was 16 years.

INJURIES

STATISTIC	AGE
Range	4-51
Average	20.8
Mode	16.0
Median	16.0

TABLE 5

The 14-15 year age group had 24 per cent of the injuries, 37 per cent of the hospitalizations and 67 per cent of the total hospitalized days. The average number of days hospitalized was 12.0 for the overall group and 19.5 for the 14-15 year-olds. The most common time for the accidents was 12 noon to 8 P. M. when 71.1 per cent occurred.

Table 6 shows a breakdown of the 160 injuries sustained in the 109 accidents. Abrasions and contusions accounted for 63 injuries; lacerations requiring suture, 23; one open knee injury; nine musculoskeletal strains; one Achilles tendon rupture which occurred in a 15-year old girl who was a passenger on a motorcycle that hit a parked boat. Her leg was caught between the cycle and the boat with resulting severe lacerations and a disrupted Achilles tendon; there was one leg injury, resulting from a speeding motorcycle hitting an oncoming automobile at an intersection, that required below knee amputation due to the soft tissue loss with interruption of the arterial blood supply. There were ten head injuries that were uncomplicated.

The 40 fractures (Table 7) sustained in 25 accidents represent almost one-fourth of all motorcycle injuries seen in the emergency room and caused the majority of the hospitalizations. One often sees automobile accidents with little if any medical problems, but at least one in four motorcycle accidents seen in our emergency room had a fracture. There were six ankle fractures, nine femoral fractures, and six tibial fractures. There were six compound fractures with five being tibia and one femoral. One 27 year old cyclist had five fractures involving femur, ankle, os calcis, pelvis and wing of ilium.

As previously mentioned, there were a

AGE (14-15 Y.O.)

- 24% of Injuries
- 37% of Hospitalizations
- 60% of Hospital Days
- Average Hospital Days
 - Group 12.0 days
 - 14-15y.o. 19.5 days

MOTORCYCLE INJURIES, LEE COUNTY

TYPE	NO.
Abrasions and Contusions	63
Lacerations Requiring Suture	23
Fractures	41
Open Knee Injury	1
Musculo-skeletal Strain	9
Concussion or Closed Head Injury	8
Skull Fracture with Death	2
Soft Tissue Injury Requiring Amputation	1
Achilles Tendon Rupture	1
Miscellaneous	11
TOTAL	160

TABLE 6

tions and a disrupted Achilles tendon; there was one leg injury, resulting from a speeding motorcycle hitting an oncoming automobile at an intersection, that required below knee amputation due to the soft tissue loss with interruption of the arterial blood supply. There were ten head injuries that were uncomplicated.

MOTORCYCLE ACCIDENTS

MOTORCYCLE ACCIDENTS - FRACTURES

PART OF BODY	NO.	COM- POUND
Skull	2	
Maxilla	1	
Scapula and Clavicle	3	
Radius	5	
Ulna	1	
Metacarpal	3	
Pelvic	3	
Femur	9	1
Tibia	6	5
Ankle	6	
Oscalcis	1	
TOTAL	40	6

TABLE 7

total of 29 hospitalizations with 13 in 1969-1970 and 16 in 1970-1971 as opposed to only two hospitalizations in 1960. It is interesting to note that two of the cases were brothers while two others were cousins. One hospitalization was a pedestrian run over by a motorcycle while another two were five and seven-year-old brothers riding a mini-bike when they hit a curb. Another hit the car of an associate of the senior authors, sailed over the hood 15 yards down the street and sustained a fractured femur. The average injury per person was 1.53 and 2.44 for the hospitalized.

Two deaths occurred in 1971. One was a 15-year-old boy who collided with a truck at an intersection and sustained a skull fracture with brain injury and instant death. The other was a 12-year-old girl who was riding with her father when a car failed to stop at a red light and hit them. She sustained a fractured skull and died two hours later.

Some almost comical circumstances surrounded some of the injuries. A bee sting of the face caused one accident; a cyclist fractured his big toe when his foot slipped off the crank pedal; another drove off an unmarked embankment and escaped with minor injuries. One cranked his motorcycle and it inadvertently went into gear, with

no rider, and damaged two automobiles. A cyclist had stopped to talk to a friend when he told the friend he was going to run over him; and in the pedestrian's efforts to get out of the cycle's path, he jumped into the cycle sustaining multiple contusions and lacerations. A motorcycle rider hit a deer on a country road. The cycle was demolished, the rider injured, and the deer continued on uninjured. A 220 pound 15-year-old boy hit a truck head-on, sailed over the hood and through the front windshield sustaining a fractured femur; and lastly, a policeman parked his motorcycle on a busy parkway to investigate an accident involving a mule. A passing motorist hit his cycle as he was mounting it and demolished the cycle. The officer was unhurt.

Discussion

An average motorcycle rider's profile could read as follows: (1) 96 per cent are male; (2) 53 per cent are married; (3) 75 per cent are under 35 years; (4) 45 per cent are under 25 years; (5) average income is \$12,500; (6) 47 per cent have been to college; (7) 22 per cent use their cycle in conjunction with a camper or a boat.⁸

Accidents involving automobiles result in injury or death 9.2 per cent of the time while motorcycle accidents result in injury or death 90.8 per cent of the time.⁹ Collision with another four wheel vehicle is the most common type of accident. The motorcycle is not always at fault as larger vehicles do not always "treat" the smaller motorized cycles as equals.¹⁰ In reviewing 55 motorcycle accidents in Lee County, the car was at fault 23 times, the motorcycle 25, the pedestrian two, an animal two, and three accidents involved only motorcycles. The most common accident is the right angle intersection collision.

"Speed too fast" is the principle circumstance in most states. Kentucky lists "failure to yield right of way." In fatal accidents, almost all states list "speed too fast."¹¹ Accidents occur usually on dry roads since motorcycles are not operated often in wet

weather. Accidents usually occur within five miles of home and accidents occur most frequently between 4 P. M. and 6 P. M. Saturday is the worst day for accidents and the summer months of June, July and August have more accidents.¹² These periods represent the time that motorcycles are ridden the most frequently.

Age has been discussed before. Fifteen per cent of the injured or killed are female; therefore, many of these must have been passengers or "birds" on the motorcycles.¹³

In a study of 123 patients injured in motorcycle accidents in Minnesota, 20 per cent were using the motorcycle for the first or second time.¹⁴ A Vermont study revealed 21 per cent had had licenses for less than one year when their accident occurred.¹⁵ Four times as many motorcycle accidents as non-motorcycle accidents involve drivers with less than one year's driving experience.¹⁶

The Minnesota study reported 70 per cent of the injured had either borrowed or rented the motorcycle.¹⁷ Twenty-nine per cent of the fatalities in Washington state did not own the motorcycle. It is estimated that 72 per cent of motorcycle operators receive no instructions in operating motorcycles.¹⁸

The head, arm and leg are most commonly injured. Most fatalities are secondary to head injuries. The wearing of safety helmets has definitely reduced mortality as shown by studies in Washington State¹⁹ and Michigan.²⁰ The latter has had an increase in mortality every year except 1967, the year their mandatory helmet law was in effect. Studies have also shown that the lighter the weight of the cycle the greater the per cent of injury. Again, this most likely represents the youth and inexperience of the driver.²¹

Legislation

Motorcycle legislation varies from state to state. As of 1969, 36 states required a special license to operate motorcycles. Forty states required riders to wear helmets. The state of Alabama regulations state that:

1. Ages 14 to 16 shall not operate a motor driven cycle of more than 5 H. P. and more than 200 pounds. A restricted license is required for above.
2. To operate a motor driven cycle of more than 5 H. P. the rider must have a regular driver's license.
3. Helmets are mandatory.
4. No special motorcycle test required.

Conclusion

The increasing popularity of the motorcycle has brought with it some major health problems. The basic build of the motorcycle with no driver protection and poor traction causes a high rate of injury when accidents occur. It is the opinion of the authors that the single biggest problem is the youth and inexperience of many of the operators of motorcycles. We feel that experience with motorcycles should first be gained by "trail" type riding and one should not be licensed before age 18. At the time of the licensing, a special motorcycle examination based on knowledge and riding of the motorcycle should be mandatory. If these guidelines were carried out, we are confident the useless and excessive high morbidity and mortality associated with motorcycles would be reduced.

Summary

The reasons for the increasing popularity of the motorcycle are outlined. The motorcycle injuries at Lee County Hospital from 1969 to 1971 are reviewed. The profile of a motorcycle owner is given as well as the usual circumstances of a motorcycle accident. Rules and regulations are discussed and finally the conclusions of the authors are given.

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WHO NEEDS THE AMA?

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(Excerpt from a speech by Edward Siegel, M. D., President of the Medical Society of New York, to MSNY.)

Problems In Everyday Inhalation Therapy And Their Solutions

D. S. Tysinger, Jr., M. D.

Dothan, Alabama

Most people though well acquainted with the intricacy of inhalation therapy do not really understand how an IPPB machine works and how to apply it to the patient. The literature is very confusing on this subject; easily understood terms are not really understood.

IPPB (intermittent positive pressure breathing) is a term that is bounced around frequently. It means noncontinuous positive pressure breathing or to give a positive pressure for inspiration to increase ventilation. Just how does this work?

To dissociate thought from machines for a moment; suppose it is desirable to cause an air flow through a tube 3mm size and one foot long (a 3mm intubation tube). If a collapsible volume container is put on one end and a constant pressure is applied to this collapsible volume container then it will collapse and flow will occur out the other end. With a 5cmH₂O constant force, 5.5 L/min will flow out the other end; 10cmH₂O pressure will cause an 8L/min flow; 15cm H₂O will cause a 10L/min flow; 20cmH₂O pressure will cause a 12L/min flow; 25cm H₂O pressure will cause a 14L/min flow. As pressure is increased flow out the other end will increase. Flow is dependent on pressure. At these flow rates all pressure is dissipated by the time the flow exits. Add tubing length or put a resistance at the open end and flow will stop. Now, to cause flow, pressure must be increased.

If pressure is desired on the gas coming out the other end a different situation exists. The volume must be limited to the amount desired for delivery. (Say this is 10L/min.) To deliver 10L/min through the one foot, 3mm tube will require 15cmH₂O pressure.

Now, if 15cmH₂O pressure is needed to the delivered gas, then 15cmH₂O to cause flow through the tube plus 15cmH₂O pressure to be applied to the flow after delivery or 30cm H₂O pressure must be applied. This will with a restricted 10L/min. flow give this 10L/min. with 15cmH₂O pressure to deliver it.

The pressure required to produce flow is the result of turbulence. Turbulence causes resistance to flow. Turbulent resistance produces the pressure. Any average size tube resistance can be overcome if the pressure is sufficient.

Now increase the tube to 5mm size for 5.5L/min. flow only 0.5cmH₂O pressure is needed. For a 7mm tube on up, 5L/min. flow can be accomplished without measurable back pressure. Ten L/min. flow in the 5mm tube requires only 1.5cmH₂O pressure; 10L/min. in the 7 mm tube requires only 0.5cmH₂O pressure to cause flow; 14L/min. flow requires 2.5cmH₂O pressure in the 5mm tube; 14L/min. requires 0.85cmH₂O in the 7mm tube; 14L/min. can be put through a 10mm tube without measurable pressures being required.

What does this mean in relation to IPPB? To design a machine that will deliver volume to the lungs, it must ventilate through tubes to get to the alveolus. If sufficient pressure is produced it will cause flow and will ventilate. The tube area of the lung is the trachea, primary, secondary, and tertiary bronchi. Beyond this point the tubes are getting smaller, but they are increasing in number so rapidly that there is large volume area. It is like blowing through a small straw to fill a balloon.

When mechanical ventilation started, the aim was to ventilate. To ventilate is to get

air in and out. Machines were designed for this purpose. They were designed to produce sufficient pressure, to cause sufficient flow to ventilate. Most mechanical ventilators will do this.

The other term is topical pulmonary chemo-therapy. This is not the same as IPPB. This term means to deliver particulate matter to the tracheo-bronchial tree. How does this differ? When pressure is needed to cause flow, this means turbulence is occurring. The higher the flow rate the more pressure is needed to produce flow through trachea, primary, secondary, and tertiary bronchi. If pressure to cause flow is higher than the cycling pressure of the machine (as in high flow rate machines) then cycling pressure will be reached and the machine will recycle before sufficient pressure to cause flow is developed.

If particles are suspended into air and the air made turbulent by flow resistance or static discharge through it, the particles rain out. To deliver particles then, means to produce air flow without significant turbulence, since pressure buildup is indigitive of turbulence then flow must be delivered with little pressure buildup to assure particle delivery.

Thus, it is one thing to ventilate, but a different thing altogether to deliver medication.

Most evaluations of machines have been to measure hyperventilation, CO_2 drop and oxygen increase which are ventilatory measurements, not to judge decreased resistance, bronchodilatation, etc., which evaluates medication delivery and effectiveness.

An IPPB machine, to effectively deliver medication to the smaller lung radicals, must have a low enough flow rate to carry the suspended particles through the trachea, primary, secondary, and tertiary bronchi without producing significant turbulent rain out. Most machines, though they may ventilate, will not medicate for this reason. The primary flow (nebulizer jet and venturi) is too high.

The rate of pressure buildup is dependent on the venturi jet and nebulizer flow which is the primary flow or pressure flow. Venturi intrainment flow is of little significance in delivery volume or flow wise. It is dampened out as pressure builds up. Only the primary flow causes pressure buildup and machine recycling.

The ratio of flow in liters to the pressure buildup area (machine volume, tubing, nebulizer, and mouthpiece) determine the rate at which pressure will buildup and at which turbulent rain out will occur. The Bennett, for instance, TV and PR series have a primary flow of 45L/min. or higher. The pressure buildup area (pressure chamber, on and off valve, tubing, nebulizer, mouthpiece, etc.) is 450cc. Expressed as a proportion this is 45L/min. to 450cc. or 1:10. The Monaghan primary flow is 30L/min. the pressure buildup area is 400cc. This gives 30:400 or 1:13.4. The Bird has a primary flow at 5 of 12L/min., and at 10 of 17L/min. and here the primary flow can be adjusted. (The Bird flow rate control changes the venturi jet flow, on the Bennett and Monaghan, high, low, or maximum-minimum flows only puts back pressure and reduces venturi intrainment.) In the Bird, the positive pressure chamber, the tubing, nebulizer exhalation valve and mouthpiece are a little over 1000cc with a flow setting of 5, it is 12L/min. to 1000cc or 1:83.4. At a flow setting of 10 it is 17L/min.-1000cc or 1:58.8. The higher the ratio the slower pressure buildup will occur and the better will be particulate delivery. The high primary flow rate fixed flow machines will not deliver particles beyond the primary bronchi though they will deliver air (will ventilate but will not medicate). A machine that will not medicate is essentially useless for inhalation therapy medication delivery.

The high initial flow rate rapid pressure buildup machines, those whose ratios are below 1:50, rain out all particles in the trachea, primary, secondary, and tertiary bronchi, and will not deliver IPPB solutions. Thus, they should not be used for aerosol delivery.

They should be restricted to where ventilation alone is needed. All that can be done with this type of equipment is to put it on the patient and take it off. There are no techniques that will make them deliver medication. They only deliver air.

Now, IPPB machines and their principles and delivery characteristics should be understood. Next, the patient will present problems, the patient is not so easily understood. Some of the problems are more easily handled with a thorough knowledge of what is happening.

I. HYPERVENTILATION: A patient who has an adequate respiratory mechanism and who cooperates, usually hyperventilates. IPPB machines are notorious for causing hyperventilation. The symptoms should be well known, (dizziness, weakness, blurred vision, headaches, peri-oral numbness and tingling, numbness and tingling of hands and feet, feeling like one is going to pass out, feeling like one cannot get a deep breath, a long breath, or a satisfactory breath, or the air breathed is doing no good.) These develop as a result of blowing off the carbon dioxide by over ventilating with or without the machine. Since the volume of CO_2 ventilated off in relation to the bicarbonate, determines the pH, not the actual low levels, this can occur in any patient. A chronic lung patient with PCO_2 of 70mmHg. will get the same symptoms ventilating his CO_2 down to 40mmHg. that a normal individual would get from ventilating a CO_2 of 40mmHg. down to 10mmHg. The pH change is the same. Anyone can hyperventilate. When the patient hyperventilates as he uses the machine, he usually blames the machine, the medication in it, or both for the trouble and does not want to use the machine. If hyperventilation is explained to the patient before the first treatment, and the therapist watching the patient as he takes the treatment frequently points out that he is hyperventilating, the patient will come to understand. If this is not sufficient, subsequent treatments can be run on five per cent CO_2 in oxygen or air. Here, only a one to two per

cent CO_2 concentration is actually delivered due to the venturi air-oxygen mixture. This replaces CO_2 as the patient hyperventilates and the patient does not get symptoms. Even in a hyperventilation with high CO_2 there is no increase using five per cent CO_2 in air with air-oxygen mixture. Other remedies are allowing the patient to breath five per cent CO_2 mixtures following treatment or the old faithful paper bag.

II. TRAPPING: Trapping is particularly common with the more severe obstructive disease patient. Here, when the patient is started on treatment he begins to trap more. This is due to too great a pressure change between the alveolus and mouth with too high a peak flow. This produces a Bernoulli effect on smaller and emphysematous radicals. Bronchiolar collapse due to high interstitial pressures and kinking of bronchi produce bronchiolar obstruction with trapping. Trapping behind plugs and edematous bronchi also cause trapping. When the inhalation therapy treatment is over the patient feels too full, tight, worse than when he started and complains about the treatment. The problem now is to untrap the patient so he can breath easier. If the IPPB machine being used is of the type with which a retard cap can be used, the therapist should put water or $12\frac{1}{2}$ mgm/cc aminophyllin in the nebulizer, put the retard cap at a medium opening and after an explanation of trapping and the use of the retard cap to relieve it, give the patient a period of breathing sufficient to allow him to untrap and feel comfortable. On subsequent treatments as the patient is given treatment and until he does not need it, treatments should be given with a retard cap. The unfortunate therapist who uses equipment not designed for retard caps has more of a dilemma. Here, if the patient is given blow bottles to use following each treatment the blow bottles will give a back pressure and allow untrapping. The patient should be watched before and after treatments. If before treatment, he breathes fairly well then after treatment reverts to modified purse-lip breathing he did trap during treatment and a retard cap

would help; or a combination treatment blow bottle period would help. In the acute asthmatic, among other things, there is trapping. Here, a retard cap should be used both to slow down flow rates by reducing pressure difference between alveolus and mouth and by prolonging expiration time thus allowing better emptying, making the next inspiration easier. Blow bottles are effective here, also, if the patient can be talked into really trying them.

III. *FLOW RATE CONTROL*: People who are put on an IPPB machine expect something. They really do not know what, but something. They feel that if their breathing is to be helped there should be some signs of something happening when breathing starts. It is hard to get people to cooperate if something does not happen. With the high flow rate machines something does happen. A large volume rapidly applies high flow rates to the mouth. The patient feels these high flow rates. Breathing normally, no such surge is noted. This is a psychological thing. People likewise, hysterically open windows, go outside, have family frantically fan them. It is all the same. This is a hysterical hyperventilation-type of state. The flow rate controlled machine should be started with a higher than needed flow rate and slowly cut down. This works better to get the patient cooperation than trying to start at a proper flow rate and adjustment. A proper flow pattern is a rather rapid rise while the trachea, and primary bronchi are being filled, (the pressure for flow) then, a slow rise as the balloon area is filled, to cut off pressure.

IV. *NAUSEA*: Nausea is a common complaint. The patient who coughs a lot and brings up a lot of sputum following a treatment will tend to vomit if the period of treatment is just before he eats. He will still be coughing during and after eating. Likewise, just after eating IPPB may cause severe coughing and again vomiting will occur. Therefore, treatments should not be given for 30 minutes before and 45 minutes after eating. The main cause of nausea and vomit-

ing associated with IPPB is the patient. If the patient sucks on the machine as he would a soda straw, (and this is what a lot of patients do with IPPB mouthpiece) he will put much of the inspired mixture into the stomach. This causes acute gastric distention with fluid collection and vomiting. The only way to stop this is to get the patient to breathe in just enough to cut the machine on then stop sucking at this point and let the machine fill him up. If there is trouble doing this then give treatments with a face mask breathing through the nose, mouth closed. As soon as the patient has adjusted to this, give treatment with mouth open and as soon as the patient will, switch to a mouthpiece. Most physicians and therapists do not realize how easy it is to blow up the stomach. There is no way to put a positive pressure at the mouth without increasing delivery to the stomach. Most unconscious patients aspirate in the resuscitation effort because the patient was not tubed and efforts caused acute gastric distention with fluid collection. Then, with chest compression stomach contents were emptied back up the esophagus. The paralyzed chest cage offers much more resistance than does the belly wall. Air follows the path of least resistance. Finally, some people gag at an idea or thought, the gag reflex is very active or is aggravated by disease or medicine. Here, a face mask is better, instructing the patient to open his mouth and breathe through his mouth.

In the patient who has extreme nausea and vomiting as part of his disease processes, IPPB treatments may have to be stopped until nausea can be controlled.

V. *COUGH*: The chronic lung and bronchitis patient is worn out from coughing. Other lung problems may be also. This patient usually has sore chest and abdominal muscles from coughing. He wants the cough stopped. Inhalation therapy, by loosening up secretions, makes the cough more effective but more frequent. This patient complains that the machine makes him worse because of this increase in cough. It is very necessary to explain that to loosen up the secretions

and get them coughed out will help stop the cough by curing the cause. The patient may have a bad spell of hyperventilation due to this coughing. He will inevitably blame the IPPB machine rather than the increased coughing for this. Here, CO_2 in air or oxygen is indicated and should be utilized. If the patient is coughing a lot during treatment, he should be watched for a period following treatment.

The final cough is the dry, hacking, non-productive cough which, when continued will give the patient a dry, burning sensation in the chest when he breathes in. This is due to hyperventilation of room air and drying of the upper airway. Here, a mild cough suppressant with mist to replace the water loss is the best treatment. Some patients do not want to cough when they take their inhalation therapy treatments. They will breathe very shallow. If their blood gases permit, the use of five per cent CO_2 in air or oxygen used in place of air or oxygen will produce deeper breathing and produce unconscious cooperation.

VI. THE UNCONSCIOUS PATIENT: The unconscious patient is usually responsive to stimuli, misinterprets stimuli, and fights back when approached. If the patient is unconscious and makes no great effort to fight the equipment, satisfactory treatments can be given. If the patient has no gag reflex, an oral airway should be inserted, the head back to prevent tongue swallowing (this should be his head position anyway.) A face mask used this way helps with the head held back. Pressures should be kept below $20\text{cmH}_2\text{O}$ to prevent blowing up of the stomach. Often a slight negative phase will increase the tracheal flow next breath because the esophagus will collapse. Also, the abdomen should have a slight pressure applied by the hand or a pneumoband should be used during treatment to prevent gastric distention. In the unconscious patient it may help to use five per cent CO_2 in air or oxygen. Set the machine on 100 per cent oxygen. This will deliver five per cent CO_2

to the lungs. This will increase the depth of ventilation, then when good depth has been reached the air-oxygen mixture control is pulled out and this level of ventilation is maintained. This technique is useful in the post-operative and cerebral ischemia-type patient, if blood gases permit. Arterial blood gases and pH must be checked when using this technique.

VII. THE SEMICONSCIOUS PATIENT:

Here, the patient is out of touch with reality, interprets everything with a self-preservation fight response. The degree of cooperation possible with the patient will determine what should be done. If the patient can be talked into putting the mouthpiece into his mouth, and the machine manually cycled with his breathing, this should be done. If no such luck, then it is necessary to use a face mask. Hence, the patient may fight the machine, hold his breath, then take deep breaths. If he does, he will get most delivery to the lungs and very little to the stomach this way. The patient will get quite worn out this way. Occasionally, it is necessary to not give treatments because of the patients' combativeness. This is the doctor's decision. Here again, if arterial blood gases permit. Five per cent CO_2 in air or oxygen will prove of great help.

VIII. FACE MASK: In the conscious and semiconscious patient a face mask is recommended. In such situations the patient is recumbent. In this position due to restriction of rib movement and due to lack of spinal movement, ventilation is poor. Atelectasis is more common. The patient breathing through his nose takes most of the medication out (about 80%) and only humidified air is delivered to the lungs. Obstruction techniques and signing procedures only blow up the stomach so that atelectasis is a by-product of the patients' state and position. Where side arm nebulized equipment is used (here only humidity is delivered normally) and due to the high flow rates, turbulence builds up rapidly with back pressure and premature machine recycling occurs. Since this type of machine is usually

oxygen driven and the turbulence in the nose causes back pressure on the venturi which slows or shuts off venturi intrainment to just oxygen, then only oxygen is delivered. The oxygen, if trapped, is rapidly absorbent leaving atelectatic lungs. This is only true for the high flow rate side arm nebulizing IPPB machine when used with a face mask. Here, atelectasis is common. With the venturi flow rate controlled equipment using face mask, much better results are obtained. High flow rate side arm equipment should not be used in IPPB treatment with a face mask.

IX. THE DEBILITATED PATIENT: The debilitated patient is physically worn out and tires very easily. A session of puffing and blowing on the machine may be too much for the patient. Here, the best thing to do is with the test lung, set the expiratory time to coincide with the patients' breathing rate and set the machine on automatic. The flow rate must be set after the patient starts breathing to be effective. Once the machine starts breathing for him, the debilitated patient will usually relax and breathe more comfortably while the treatment is going on. His energy should be thus saved for coughing and if there is trouble, then suctioning should be done about every five minutes and for a period following treatment to assure a clear airway. Usually, a mouthpiece can be used, however, a face mask may be necessary. In some cases, blood gases permitting five per cent CO_2 in air or oxygen may help increase effective treatment.

X. THE SMART ALEC WHO HAS HAD PREVIOUS TREATMENTS: This is the biggest problem of all; the one who knows all about it. Usually, he has been treated where the machine is taken in, put on the patient and no instructions given (Does a patient need to be told how to breathe?) Don't bother trying to prove your point or prove him wrong. This type is stupid and suffering from hospitalitis. Ask him to please try the way he should breathe and with his previous knowledge see how much better it will work when done this way. Explain that

this is what his doctor ordered because he thought it was necessary, thus the least he can do is try it out.

XI. OBSTRUCTIVE TECHNIQUE: (Also called sighing technique): IPPB machines like any other mechanical breathing equipment will ventilate the normally ventilatable lung tissue first. One should always remember that when using IPPB or any medication delivery procedure it will be delivered to the normal and easily ventilated lung volume first, if flow rates are low enough to carry particles there. Next, narrowed bronchi will be ventilated. Very little if any will get into obstructive or atelectatic areas. To treat these states another technique is needed. In areas of alveolar atelectasis, pressures of 35-40cmH₂O pressure are needed to cause the alveoli to pop open. A machine set at 15-20cm water pressure will not ventilate this area. Obstructed tubes are nonflow tubes, thus, a little distention may occur at end inspiration with very small volume changes but nothing significant. To get around obstruction then and to pop open atelectatic alveoli, sufficient flow and pressure must be produced. The way is as follows. After a normal inspiration has been completed, as observed by the therapist, the machine is held on, pressure continues to rise, and some volume flow occurs. This is in effect producing a plateau with slowly increasing pressure and volume. The pressure is held on for 30 seconds if the pressure does not reach 40cmH₂O pressure. If pressure reaches 40cmH₂O pressure before 30 seconds then the machine is allowed to recycle when 40cmH₂O pressure is reached. This gives both pressure and volume to dilate the bronchial tube and deliver volume to obstructed areas, and sighing pressure for atelectatic alveoli. This is done with about every fifth breath. The patient is watched for signs of hyperventilation and fatigue. Before starting the therapist explains to the patient what he is doing and why. This technique usually brings up secretions at such a rate the patient is impressed and works with it well. This technique is of

(Continued on Page 111)

He won't resist feeling better with Mylanta[®]

Because the taste is good.

- ☐ promptly relieves hyperacidity
- ☐ also relieves fullness and bloating
- ☐ non-constipating



LIQUID **MYLANTA**[®] TABLETS

aluminum and magnesium hydroxides with simethicone



STUART PHARMACEUTICALS | Division of ICI America Inc. | Wilmington, Del. 19899 | Pasadena, Calif. 91109

If you've seen one, have you really seen them all?

The following patient profiles represent typical clinical situations, but do not necessarily represent actual cases.

Age 22, previously normal menses with occasional menorrhagia. Now on a sequential O.C. for four months. Complains of heavy flow, occasional intracyclic bleeding, edema, tender swollen breasts.

Indicates estrogen excess.

1st choice: Switch to a combination 50-mcg.-estrogen O.C. (such as **Demulen®**).

Age 19, small breasts, minor hirsutism, oily hair and skin. History of metrorrhagia, skipped or scanty menses. New user.

Indicates androgenic excess or estrogen deficiency (fertility is suspect).

1st choice: An estrogen-dominant O.C. (such as **Enovid-E®**).

Age 25, average frame, poor complexion. No problem with menses, normal para 1. On a low-estrogen/high-progestogen O.C. for two years. Now complains of scanty flow, decreased libido, depression.

Indicates probable buildup of progestogen-related side effects.

1st choice: Switch to a center-spectrum O.C. with more estrogen, less progestational activity (such as **Ovulen®**).

Age 21, short, mammosome, with normal menses, some acne. Was put on premarin regimen of 50-mcg.-estrogen/moderate-progestogen O.C. for two months. Now has increased acne.

Indicates metabolic production of androgen or relative estrogen deficiency.

1st choice: Switch to a 100-mcg.-estrogen combination (such as **Enovid-E®** or a sequential).



Unmasked, physiologically and anatomically, they're not all the same. A basic difference lies in their hormone profiles. One may secrete too much estrogen, another not enough...or perhaps too much androgen; the vast majority would fit somewhere into the broad center spectrum.

Although the profiles described below may not be completely predictive, in optimal O.C. selection, the estrogen-progestogen activity ratio should be carefully matched to the patient profile. Searle offers you O.C.s in a range not only suitable for your patients in the balanced center spectrum, but also adaptable to the patient with another type of hormone profile.

Oral contraceptives are complex medications. Among the commonly reported adverse reactions are: intracycle bleeding, fluid retention, tender or swollen breasts, exacerbation of acne condition, changes in libido, amenorrhea while on medication and upon discontinuance, nausea, leg cramps, headaches, weight gain. Therefore, after reference to the prescribing information, oral contraceptives should be prescribed with care.

*Note: In some patients any level of exogenous estrogen or progestogen may produce symptoms of excess hormone activity.

25, tall, slender, athletic, flat chest. On a progestogen-dominant 50-mcg.-estrogen O.C. recurrent trichomoniasis

Monilia. Indicates estrogen deficiency and excess of progestogen in current O.C. 1st choice: Switch to a combination pill with 100 mcg. estrogen and less progestational activity (such as **Enovid-E**® or **Ovulen**® or a sequential).

Age 23, "Miss America" figure, previously normal menses, healthy skin and hair. On a 50-mcg.-estrogen pill for four months. Complains of intracyclic bleeding.

Indicates probable need for more estrogen. 1st choice: Switch to a center-spectrum O.C. with more estrogen and moderate progestogen dominance (such as **Ovulen**®).

Age 21 college senior, average build. On highly progestogen-dominant/low-dose-estrogen O.C. for six months. Now complains of amenorrhea, between-cycle headaches, weight gain

Indicates probable progestogen excess.

1st choice: Switch to a center-spectrum pill (such as **Ovulen**®).

Age 27, slightly overweight, multiparous. Nausea with all three pregnancies and with a sequential O.C. three years ago. Has premenstrual fluid retention and leg cramps

Indicates probable excess of estrogen

1st choice: A 50-mcg.-estrogen/progestogen-dominant pill (such as **Demulen**®).

Ovulen® a balanced center-spectrum O.C. for most

Each white tablet contains ethynodiol diacetate 1 mg./mestranol 0.1 mg.

Demulen® a moderately progestogen-dominant O.C. for many

Each white tablet contains ethynodiol diacetate 1 mg./ethinyl estradiol 50 mcg.

Each pink tablet in **Ovulen**-28® and **Demulen**-28 is a placebo, containing no active ingredients. Both **Ovulen** and **Demulen** are available in 21- and 28-pill schedules.

SEARLE Products of SEARLE & CO.
San Juan, Puerto Rico 00936

Enovid-E® a moderately estrogen-dominant O.C. for some

Each tablet contains norethynodrel 2.5 mg./mestranol 0.1 mg.

SEARLE Product of Searle Laboratories Division
G.D. SEARLE & CO.
P.O. Box 5110, Chicago, Illinois 60680
Where "The Pill" Began

For a brief summary of prescribing information, please see next page.

a family of O.C. products to help you match
the right pill to the right patient

Ovulen®

Each white tablet contains
ethynodiol diacetate 1 mg / mestranol 0.1 mg.

Demulen®

Each white tablet contains
ethynodiol diacetate 1 mg / ethinyl estradiol 50 mcg.

Each pink tablet in Ovulen-28® and Demulen®-28 is a placebo, containing no active ingredients.

Actions—Ovulen and Demulen act to prevent ovulation by inhibiting the output of gonadotropins from the pituitary gland. Ovulen and Demulen depress the output of both the follicle-stimulating hormone (FSH) and the luteinizing hormone (LH).

Special note—Oral contraceptives have been marketed in the United States since 1960. Reported pregnancy rates vary from product to product. The effectiveness of the sequential products appears to be somewhat lower than that of the combination products. Both types provide almost completely effective contraception.

An increased risk of thromboembolic disease associated with the use of hormonal contraceptives has now been shown in studies conducted in both Great Britain and the United States. Other risks, such as those of elevated blood pressure, liver disease and reduced tolerance to carbohydrates, have not been quantitated with precision.

Long-term administration of both natural and synthetic estrogens in subprimate animal species in multiples of the human dose increases the frequency of some animal carcinomas. These data cannot be transposed directly to man. The possible carcinogenicity due to the estrogens can be neither affirmed nor refuted at this time. Close clinical surveillance of all women taking oral contraceptives must be continued.

Indication—Ovulen and Demulen are indicated for oral contraception.

Contraindications—Patients with thrombophlebitis, thromboembolic disorders, cerebral apoplexy or a past history of these conditions, markedly impaired liver function, known or suspected carcinoma of the breast, known or suspected estrogen-dependent neoplasia and undiagnosed abnormal genital bleeding.

Warnings—The physician should be alert to the earliest manifestations of thrombotic disorders (thrombophlebitis, cerebrovascular disorders, pulmonary embolism and retinal thrombosis). Should any of these occur or be suspected the drug should be discontinued immediately.

Retrospective studies of morbidity and mortality conducted in Great Britain and studies of morbidity in the United States have shown a statistically significant association between thrombophlebitis, pulmonary embolism, and cerebral thrombosis and embolism and the use of oral contraceptives. There have been three principal studies in Britain^{1,3} leading to this conclusion, and one⁴ in this country. The estimate of the relative risk of thromboembolism in the study by Vessey and Doll³ was about sevenfold, while Sartwell and associates⁴ in the United States found a relative risk of 4.4, meaning that the users are several times as likely to undergo thromboembolic disease without evident cause as nonusers. The American study also indicated that the risk did not persist after discontinuation of administration and that it was not enhanced by long-continued administration. The American study was not designed to evaluate a difference between products. However, the study suggested that there might be an increased risk of thromboembolic disease in users of sequential products. This risk cannot be quantitated, and further studies to confirm this finding are desirable.

Discontinue medication pending examination if there is sudden partial or complete loss of vision, or if there is a sudden onset of proptosis, diplopia or migraine. If examination reveals papilledema or retinal vascular lesions medication should be withdrawn.

Since the safety of Ovulen and Demulen in pregnancy has not been demonstrated, it is recommended that for any patient who has missed two consecutive periods pregnancy should be ruled out before continuing the contraceptive regimen. If the patient has not adhered to the prescribed schedule the possibility of pregnancy should be considered at the time of the first missed period.

A small fraction of the hormonal agents in oral contraceptives has been identified in the milk of mothers receiving these drugs. The long-range effect to the nursing infant cannot be determined at this time.

Precautions—The pretreatment and periodic physical examinations should include special reference to the breasts and pelvic organs, including a Papanicolaou smear since estrogens have been known to produce tumors, some of them malignant, in five species of subprimate animals. Endocrine and possibly liver function tests may be affected by treatment with Ovulen or Demulen. Therefore, if such tests are abnormal in a patient taking Ovulen or Demulen, it is recommended that they be repeated after the drug has been withdrawn for two months. Under the influence of progestogen-estrogen preparations pre-existing uterine fibromyomas may increase in size. Because these agents may cause some degree of fluid retention, conditions which might be influenced by this factor, such as epilepsy, migraine, asthma, cardiac or renal dysfunction, require careful observation. In breakthrough bleeding, and in all cases of irregular bleeding per vaginam, nonfunctional causes should be borne in mind. In undiagnosed bleeding per vaginam adequate diagnostic measures are indicated. Patients with a history of psychic depression should be carefully observed and

the drug discontinued if the depression recurs to a serious degree. Any possible influence of prolonged Ovulen or Demulen therapy on pituitary, ovarian, adrenal, hepatic or uterine function awaits further study. A decrease in glucose tolerance has been observed in a significant percentage of patients on oral contraceptives. The mechanism of this decrease is obscure. For this reason, diabetic patients should be carefully observed while receiving Ovulen or Demulen therapy. The age of the patient constitutes no absolute limiting factor, although treatment with Ovulen or Demulen may mask the onset of the climacteric. The pathologist should be advised of Ovulen or Demulen therapy when relevant specimens are submitted. Susceptible women may experience an increase in blood pressure following administration of contraceptive steroids.

Adverse reactions observed in patients receiving oral contraceptives—A statistically significant association has been demonstrated between use of oral contraceptives and the following serious adverse reactions: thrombophlebitis, pulmonary embolism and cerebral thrombosis.

Although available evidence is suggestive of an association, such a relationship has been neither confirmed nor refuted for the following serious adverse reactions: neuro-ocular lesions, e.g. retinal thrombosis and optic neuritis.

The following adverse reactions are known to occur in patients receiving oral contraceptives: nausea, vomiting, gastrointestinal symptoms (such as abdominal cramps and bloating), breakthrough bleeding, spotting, change in menstrual flow, amenorrhea during and after treatment, edema, chloasma or melasma, breast changes (tenderness, enlargement and secretion), change in weight (increase or decrease), changes in cervical erosion and cervical secretions, suppression of lactation when given immediately post partum, cholestatic jaundice, migraine, rash (allergic), rise in blood pressure in susceptible individuals and mental depression.

Although the following adverse reactions have been reported in users of oral contraceptives, an association has been neither confirmed nor refuted: anovulation post treatment, premenstrual-like syndrome, changes in libido, changes in appetite, cystitis-like syndrome, headache, nervousness, dizziness, fatigue, backache, hirsutism, loss of scalp hair, erythema multiforme, erythema nodosum, hemorrhagic eruption and itching.

The following laboratory results may be altered by the use of oral contraceptives: hepatic function: increased sulfobromophthalein retention and other tests; coagulation tests: increase in prothrombin, Factors VII, VIII, IX and X, thyroid function: increase in FBI and butanol extractable protein bound iodine, and decrease in T₃ uptake values, metyrapone test and pregnanediol determination.

References: 1. Royal College of General Practitioners. Oral Contraception and Thrombo-Embolic Disease, J. Coll. Gen. Pract. 13:267-279 (May) 1967. 2. Inman, W. H. W., and Vessey, M. P. Investigation of Deaths from Pulmonary, Coronary, and Cerebral Thrombosis and Embolism in Women of Child-Bearing Age, Brit. Med. J. 2:193-199 (April 27) 1968. 3. Vessey, M. P., and Doll, R. Investigation of Relation Between Use of Oral Contraceptives and Thromboembolic Disease. A Further Report, Brit. Med. J. 2:651-657 (June 14) 1969. 4. Sartwell, P. E., Masi, A. T., Arthes, F. G., Greene, G. R., and Smith, H. E. Thromboembolism and Oral Contraceptives. An Epidemiologic Case-Control Study, Amer. J. Epidemiol. 90:365-380 (Nov.) 1969.

SEARLE

Products of SEARLE & CO.
San Juan, Puerto Rico 00936

Enovid-E®

norethynodrel 2.5 mg / mestranol 0.1 mg

Actions—Enovid-E acts to prevent ovulation by inhibiting the output of gonadotropins from the pituitary gland. Enovid-E depresses the output of both the follicle-stimulating hormone (FSH) and the luteinizing hormone (LH).

Indication—Enovid-E is indicated for oral contraception.

The *Special Note, Contraindications, Warnings, Precautions and Adverse Reactions* listed above for Ovulen and Demulen are applicable to Enovid-E and should be observed when prescribing Enovid-E.

Enovid-E®

brand of norethynodrel with mestranol

SEARLE

Product of Searle Laboratories Division
G. D. SEARLE & CO.
P.O. Box 5110, Chicago, Illinois 60680
Where "The Pill" Began

(Continued from Page 106)

particular help in preventing alveolar atelectasis in the coronary care unit, post-operatively, especially in upper abdominal procedures, and debilitated nonmoving bed patients. In continuous ventilation of a patient, IPPB with obstructive technique every one to two hours is the best and safest method of sighing the patient.

Obstructive technique cannot be done with the high fixed flow rate, low compres-

sion volume area machines. If they are not pressure limiting, then pressure exceeds safe lung pressures in one to two seconds. If they are pressure limiting, then the valve fluctuates between cycling pressure and limiting pressure. This fluttering will usually prevent patient cooperation.

Scientific inhalation therapy can be carried out effectively by a knowledgeable technician who has been trained to use proper equipment.

AAP Calls for Voluntary Compliance With Safety Closure Regulations

The American Academy of Pediatrics is urging manufacturers and consumers to voluntarily affix child resistant safety closures on those items covered in the Poison Prevention Packaging Act of 1970 well ahead of the time proposed federal regulations calling for such closures are to be implemented.

Calling for immediate voluntary compliance to such regulations, the Academy's Subcommittee on Accidental Poisoning in its committee statement published with the May 1 *Newsletter*, took note that federal regulations under the Act (P. L. 9-1601) were being published in the Federal Register as of April 1, 1972 and in most instances would take six months to one year to become effective.

"Because of this delay between the dates of publication and subsequent implementation of the regulations, it is clear that voluntary compliance with the proposed safety packaging regulations will be required if a significant impact on childhood poisoning rates from safety packaging is to be seen in the near future," the Subcommittee emphasized.

The Subcommittee indicated its support of the Poison Prevention Packaging Act of 1970, and stressed the immediate need for voluntary compliance for the following products in anticipation of the dates they will become effective:

- Aspirin (regulation effective August 15, 1972).
- Liquid furniture polish (regulation effective September 13, 1972).
- Methyl Salicylate also known as oil of wintergreen (regulation effective late September, 1972).
- Controlled drugs including all narcotics, barbiturates, and amphetamine-like drugs (regulation effective early October, 1972).

In addition, the Subcommittee urges that child resistant safety closures be affixed as soon as possible to prescription drugs; proprietary drugs; drain cleaners, petroleum distillates; household pesticides; high phosphate detergents, and bleach products.

The Subcommittee added that safety packaging, as part of a comprehensive program for poison prevention, must be closely coordinated with community pharmacists, pharmaceutical societies, proprietary drug manufacturers and manufacturers of household products. The Subcommittee concluded that pediatricians should encourage their local pharmacists to comply with the proposed recommendations promptly, and aid the pharmacist with the necessary public education.

PHYSICIAN PLACEMENT SERVICE IN ALABAMA

The Physician Placement Service of the Medical Association of the State of Alabama is designed to assist both physicians and communities. MASA members having knowledge of practice opportunities or wishing to relocate their own practices are urged to communicate with the Placement Service. For further information: write Mr. Emmett Wyatt, Executive Assistant, Medical Association of the State of Alabama, 19 South Jackson Street, Montgomery, Alabama 36104, or Telephone 263-6441.

Locations Wanted

General Practice—

Age 32; University of Texas, Southwestern, 1968; seeking institutional practice; Available January 1973. LW-3/3

Age 41; Temple University, 1963; National Board; Board eligible; seeking associate or group practice; Available December 1972. LW-3/4

Age 45; Medical School of Iowa, 1956; Board certified; seeking associate, group, industrial, institutional practice or emergency room, student health - teaching family practice; Available September 1, 1972. LW-3/6

Age 56; Ohio State Univ., 1943; Board certified; seeking associate, group, industrial, or institutional practice. LW-3/7

Internal Medicine—

Age 31; Medical College of Alabama, 1968; National Board; Available July 1972. LW-13/6

Age 29; Emory University School of Medicine, 1966; Board eligible, seeking group practice. Available July 1972. LW-4/5

Age 31; University of Miami, 1964; Board certified, seeking group or institutional practice. Available January 1973. LW-4/7

Age 29; National University of Mexico, 1966; seeking group or institutional practice; Available July 15, 1972. LW-4/13

Age 33; Cornell University, 1936; National Board; Board certified; seeking assistant or associate practice. LW-4/14

Age 30; Univ. of Virginia, 1967; Board eligible; seeking group practice; Available June 30, 1973. LW-4/15

Age 30; Vanderbilt University, 1967; National Board; Board eligible; seeking solo, associate, or group practice; Available July, 1973. LW-4/16

Neurology

Age 30; Northwestern University, 1967; National Board; Board eligible; seeking solo, associate, or group practice; Available June 1973. LW-5/1

Obstetrics-Gynecology—

Age 49; Marquette University, 1945; Board certified; seeking institutional practice. LW-15/1

Age 57; Marquette University, 1943; Board certified; seeking industrial, institutional or clinical practice. LW-15/2

Ophthalmology—

Age 31; Chicago Medical School, 1966; National Board; seeking associate or group practice; Available July, 1973. LW-6/6

Age 32; State University of New York at Buffalo, 1966; National Board; seeking associate practice; Available July 1972. LW-6/7

Age 42; George Washington University, 1959; National Board; Board certified; seeking group or institutional practice; Available 1972. LW-6/8

Orthopedic Surgery—

Age 34; University of California, 1963; seeking group or associate practice. Available July 1972. LW-14/1

Age 31, Temple University, 1965; National Board; seeking group or associate practice. Available July 1972. LW-14/2

University of Illinois, 1965; National Board; seeking group or associate practice. Available July 1, 1972. LW-14/3

Age 31; University of Alabama, 1966; National Board; Available July, 1973. LW-14/4

Age 31; Baylor, 1966; Board eligible; seeking associate practice; available July, 1973. LW-14/5

Otolaryngology—

Age 32; Tulane University Medical School, 1965; Board certified; seeking solo, associate, or group practice; Available September 1, 1972. LW-16/2

Radiology—

Age 30; Medical College of Virginia, 1966; National Board, seeking solo or associate practice. Available June 1972. LW-10/4

Age 31; Medical College of Georgia, 1966; National Board; Board certified; seeking group practice; Available August 1, 1972. LW-10/6

Age 31; University of Iowa, 1966; seeking assistant or associate practice; Available October 1, 1972. LW-10/8

Age 32; Louisiana State, 1966; Available September 1, 1972. LW-10/9

Age 43; Univ. of Tennessee, 1962; Available July 1, 1973. LW-10/10

PLACEMENT SERVICE

Age 33; Univ. of Kentucky, 1966; Board eligible; seeking solo, associate, or group practice; Available November, 1972. LW-10/11

Surgery—

Age 33; University of Maryland, 1965; seeking solo, group, or associate practice; Available July 1973. LW-11/7

Age 33; University of Tennessee, 1967; seeking practice in General Surgery. Available July 1972. LW-11/8

Age 48; Duke University, 1947; National Board; Board certified; seeking group practice in general surgery; Available July 1, 1972. LW-11/9

Age 39; Creighton University School of Medicine, 1957; National Board; Board certified; seeking associate or group practice; Available June, 1972. LW-11/10

Age 32; Medical College of Virginia, 1965; Board eligible; seeking associate or group practice; Available August, 1972. LW-11/13

Age 35; Univ. of Oklahoma, 1964; Board eligible; seeking associate or group practice; Available Jan. 1, 1973. LW-11/14

Urology—

Age 34; Medical College of Georgia, 1967; seeking group or associate practice; Available July 1972. LW-12/1

Age 36; Louisiana State University Medical School, 1961; Board eligible; seeking associate practice; Available December, 1972. LW-12/4

Age 35; Univ. of Miami, 1964; National Board; Board eligible; seeking associate, group, or institutional practice; Available Jan. 1973. LW-12/5



Physicians Wanted

Special Openings—

Wanted, qualified physicians in either OB-GYN, Internal Medicine, or Thoracic Vascular Surgery, to practice with group clinic. The clinic is a 16 man multi-specialty group, and is located in a city of 35,000 with a trade area of 160,000. Excellent recreational facilities and educational opportunities in the area. PW-14

Opportunity for Internist, Board Certified or eligible, interested in Cardiology, in town of 11,000 population—service area 40,000—south Alabama. Modern 86-Bed (JCAH) general hospital with 8-Bed Combination Intensive and Coronary Care Unit under construction. Seven GP's, Certified Surgeon, Radiologist—excellent city school system. PW-15

Internists—one or two needed in University town of 40,000 plus population in Southeast Alabama—Young vigorous multi-specialty group—Generous initial salary and early partnership. PW-16

Internists, Board-certified or eligible. One needed now and another in 1 or 2 years. For early partnership with internist in south Alabama city of 40,000 plus population. New office building adjacent to 181-bed hospital. Practice largely hospital in-patient and Cardiology. PW-21

Opportunity for a Board certified or eligible surgeon to be associated with a Board surgeon in city of 150,000 population. PW-21/1

General Practitioner or Internist for associate or separate practice in Birmingham. Modern office space and excellent hospital facilities. PW-26

Internist wanted, Board certified, Town of 10,000 population, Southwest Alabama. New 51-bed general hospital, I.C.U. Physicians: 5 GP's, Certified Surgeon and Radiologist. Within easy access, excellent fresh and salt water fishing, hunting including deer and turkey. Public and private schools. One hour drive from two metropolitan areas. PW-18

Wanted, internists, generalists, radiologist, orthopedist, general surgeons, town of 15,000 population in county of 45,000 population in southeast Alabama. Attractive for a group setup. High income area and marked scarcity of physicians. Excellent schools and recreational facilities. Newly expanded hospital. PW-17

Wanted: Immediately. Pediatrician to replace recently deceased partner in northeast Alabama. Enter busy practice in a predominantly GP area. Enjoy rural, quiet living with nearby scenic and recreational facilities. Salary, practice, everything negotiable. PW-19

Wanted: General Practitioner or Internist to join active 4-M. D. professional association—3-GP's, 1 Board Surgeon. Modern offices, accredited 75 bed hospital. Beautiful town of 10,000 with excellent churches, schools (public and private). Salary for 3-6 months then arrangement for full partnership. PW-22

General Practitioners—

For town of 2,000 population located in trade area of 15,000 population in northeast Alabama. Nearest metropolitan centers 30 miles distance. Industrial area. Clinic and some office equipment available. Several churches, schools, and civic clubs. PW-23

Opportunity for GP to join well established four-man partnership; three general practitioners and one board certified surgeon. Practice located in city of 8,000 population, trade area of 60,000, north-central Alabama. Modern new partnership—

(Continued on Page 116)

Pinworm therapy is often a family affair



Contraindications: History of hypersensitivity to thiabendazole.

Warnings: If hypersensitivity reactions occur, drug should be discontinued immediately and not resumed. Rarely, erythema multiforme has been associated with thiabendazole therapy; in severe cases (Stevens-Johnson syndrome), fatalities have occurred. Because CNS side effects may occur quite frequently, activities requiring mental alertness should be avoided. Safe use in pregnancy or lactation has not been established.

Precautions: Ideally, supportive therapy is indicated for anemic, dehydrated, or malnourished patients prior to initiation of anthelmintic therapy. In presence of hepatic or renal dysfunction,

patients should be carefully monitored.

Adverse Reactions: Most frequently encountered are anorexia, nausea, vomiting, and dizziness. Less frequently, diarrhea, epigastric distress, pruritus, weariness, drowsiness, giddiness and headache have occurred. Rarely, tinnitus, hyperirritability, numbness, abnormal sensation in eyes, blurring of vision, xanthopsia; hypotension, collapse; enuresis; transient rise in cephalin flocculation and SGOT; perianal rash, cholestasis and parenchymal liver damage; hyperglycemia; transient leukopenia; malodor of the urine, crystalluria, hematuria; appearance of *Ascaris* in the mouth and nose. Hypersensitivity reactions

A New Dosage Form:

Chewable Tablets 500 mg

Mintezol[®]

(THIABENDAZOLE | MSD)



so easy to take
everyone in the family
will keep to the
regimen you prescribe

side: fever, facial flush, chills, conjunctival injection, edema, anaphylaxis, skin rashes, erythema multiforme (including Stevens-Johnson syndrome), and lymphadenopathy.
Supplied: Chewable tablets, containing 500 mg thiabendazole, in boxes of 36, strip packaged, individually foil wrapped; Suspension, containing 500 mg thiabendazole per 5 cc, in bottles of 120 cc.

For more detailed information, consult your MSD representative or see the Direction Circular. Merck Sharp & Dohme, Division of Merck & Co., Inc., West Point, Pa. 19486

MSD
MERCK
SHARP
& DOHME

addendum

INDICATION | DOSAGE SCHEDULE

MINTEZOL[®] (Thiabendazole, MSD) has demonstrated effectiveness against a broad spectrum of nematode infestations, whether encountered singly or in combination. Dosages are weight related; therefore, a weight-dose chart is included in the Direction Circular for your convenience when writing a prescription. MINTEZOL should be given after meals if possible.

INDICATIONS	DOSAGE (1st Day)	ADDITIONAL REGIMEN	COMMENTS
Pinworm disease	Two doses of 1 tablet/50 lb	Repeat 7 days later	This regimen is designed to reduce the risk of reinfection. However, if not practical, repeat the regimen the next day.
Threadworm,* large roundworm,* hookworm,* and whipworm* disease	Two doses of 1 tablet/50 lb	Repeat the next day	Alternatively, a single dose of 2 tablets/50 lb may be given. However, a higher incidence of side effects should be expected.
Creeping eruption	Two doses of 1 tablet/50 lb	Repeat the next day	If active lesions are still present 2 days after completing this regimen, a second course is recommended.
Symptoms of trichinosis* during the invasive phase of the disease	Two doses of 1 tablet/50 lb	Repeat for 2 to 4 successive days	The optimal dosage for the treatment of trichinosis has not been established.

The recommended maximal daily dosage is 3 g (6 tablets).

*Clinical experience with thiabendazole for treatment of each of these conditions in children weighing less than 30 lb has been limited.

PLACEMENT SERVICE

(Continued from Page 113)

owned offices adjacent to modern 125-bed fully accredited hospital. Salaried first year with possible partnership status at end of first year.

PW-27

For community of 1,500 population located in south Alabama near city of 12,000 population. Hospitals located within 25 miles. Office space and equipment available. Farming, cattle and textile industries in the area. Several churches and school. Civic clubs and golf courses.

PW-1-1

Opportunity for two general practioners to assist two established GP's in a progressive comprehensive medical program in rural county of 12,500 population. Modern new office building, fully equipped, located in county seat, 20 miles west of Montgomery, Alabama. Excellent salary. Several churches, school, and recreation areas.

PW-1/8

Opportunity in town of 3,000 population located in trade area of 12,000 population in south Alabama. 23-bed hospital. Office space available. Numerous churches and schools. Recreational areas nearby.

PW-1/11

Opportunity for associate in general practice or take over general practice in town of 1,200 population in south central Alabama with trade area of 5,000 population. Well established practice and well equipped office. Located near recreational area.

PW-1/12

Opportunity in town of 3,000 population in trade area of 15,000 located in West Alabama. Clinic building available with equipment. Farming and several small industries. Several schools and churches.

PW-1/13

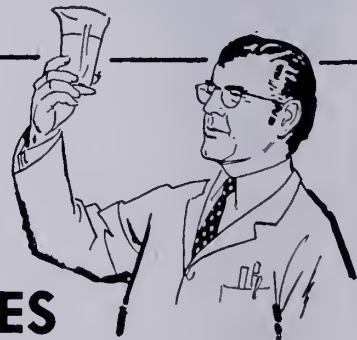
Opportunity in south Alabama in town of 2,700 population, trade area of 15,000 population. Nearest large city of 30,000 population located 45 miles. Nearest hospital is 10 miles. One physician now engaged in practice in the town. Necessary arrangements will be made for office space, equipment, and housing. Industrial and agricultural area. Churches, schools, civic and social activities.

PW-30

Opportunity in southeast Alabama in town of 3,000 population, trade area of 15,000 population. Nearest large city, 8 miles, 40,000 population, and 2 large hospitals. Office space and housing readily available. Industrial and agricultural area. Churches, schools, civic and social activities.

PW-35

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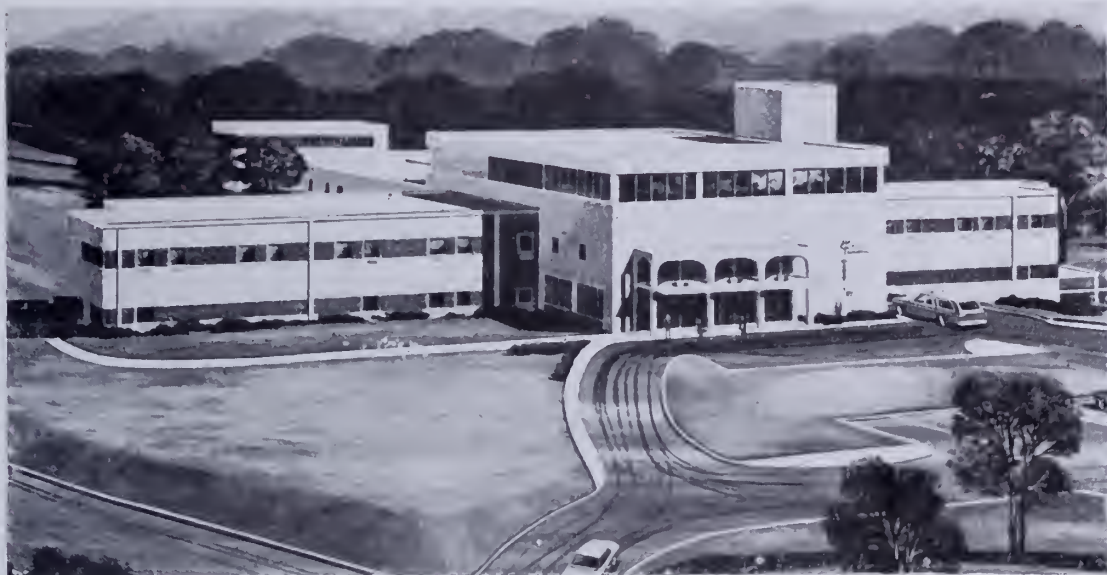
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This 113-bed non-governmental psychiatric hospital provides modern facilities for diagnosis and treatment of patients with all degrees of illness, including those who show severely disturbed behavior. Alcoholic and drug abuse patients are also accepted.

In addition to care by psychiatrists and by consultants in all medical specialties, the treatment program includes occupational, recreational, and physical therapy, social services, and tutoring. Emphasis is on short-term, intensive treatment of voluntary patients.

Hill Crest is a member of: American Hospital Association, National Association of Private Psychiatric Hospital, Alabama Hospital Association, Birmingham Regional Hospital Council.

Accredited by Joint Commission on Accreditation of Hospitals. Medicare Approved. Blue Cross Participating Hospital.

PSYCHIATRISTS:

James K. Ward, M. D.
Hardin M. Ritchey, M. D.
F. Joseph Nuckols, M. D.
James A. Greene, M. D.
Charles W. Moorefield, M. D.

ADMINISTRATOR:

Robert V. Sanders

DIRECTOR OF SOCIAL SERVICES:

James T. Kemp, A. C. S. W.

HILL CREST HOSPITAL

Hill Crest Foundation, Inc.

6869 Fifth Avenue South

Birmingham, Alabama 35212

PHONE: 205-836-7201



around the state

Vital Statistics

NEW MEMBERS

Monroe County

Martens, Carl Walter, b 41, mc U. Ala. '67, recip. NBME '70, 1116 South Alabama Avenue, Monroeville, Alabama 36460. GP.

Montgomery County

Odom, Shepherd Albert, b 39, mc U. Ala. '70, recip. Ga. '71, 3980 Governors Drive, Montgomery, Alabama 36111. GP.

MEMBERS DECEASED

Jefferson County

Smith, James Clement, Birmingham, Alabama, Deceased 6/24/72.

Williams, James Hayes, Birmingham, Alabama, Deceased 1/31/72.

MEMBERS REMOVED

Bullock County

Fisher, Gilbert Eugene, Union Springs, Alabama, Transfer to Nonmember.

Chambers County

Herring, James Richard, Lafayette, Alabama, Transfer to Nonmember.

Patterson, George Washington, Langdale, Alabama, Transfer to Nonmember.

Clarke County

Rudder, William Harwell, Jackson, Alabama, Transfer to Nonmember.

Jefferson County

Arnold, Sidney William, Memphis, Tennessee, Moved from State.

Carey, Joshua Harlan, New Orleans, Louisiana, Moved from State.

CHANGES OF ADDRESS

Etowah County

Suttle, Roger C., Jr., present Gadsden to 417B South 4th Street, Gadsden, Alabama 35901.

Jefferson County

Cothran, Robert M., present Birmingham to 902 East 5th Street, Tuscumbia, Alabama 35674.

Silberman, Donald J., present Birmingham to Suite 522, Medical Towers, 1717-11th Avenue South, Birmingham, Alabama 35205.

Ward, John L., present Birmingham to Clinical Laboratory, Richland Memorial Hospital, Columbia, South Carolina 29201.

Yarbrough, Ralph H., present Birmingham to 2608-10th Avenue South, Birmingham, Alabama 35205.

Lee County

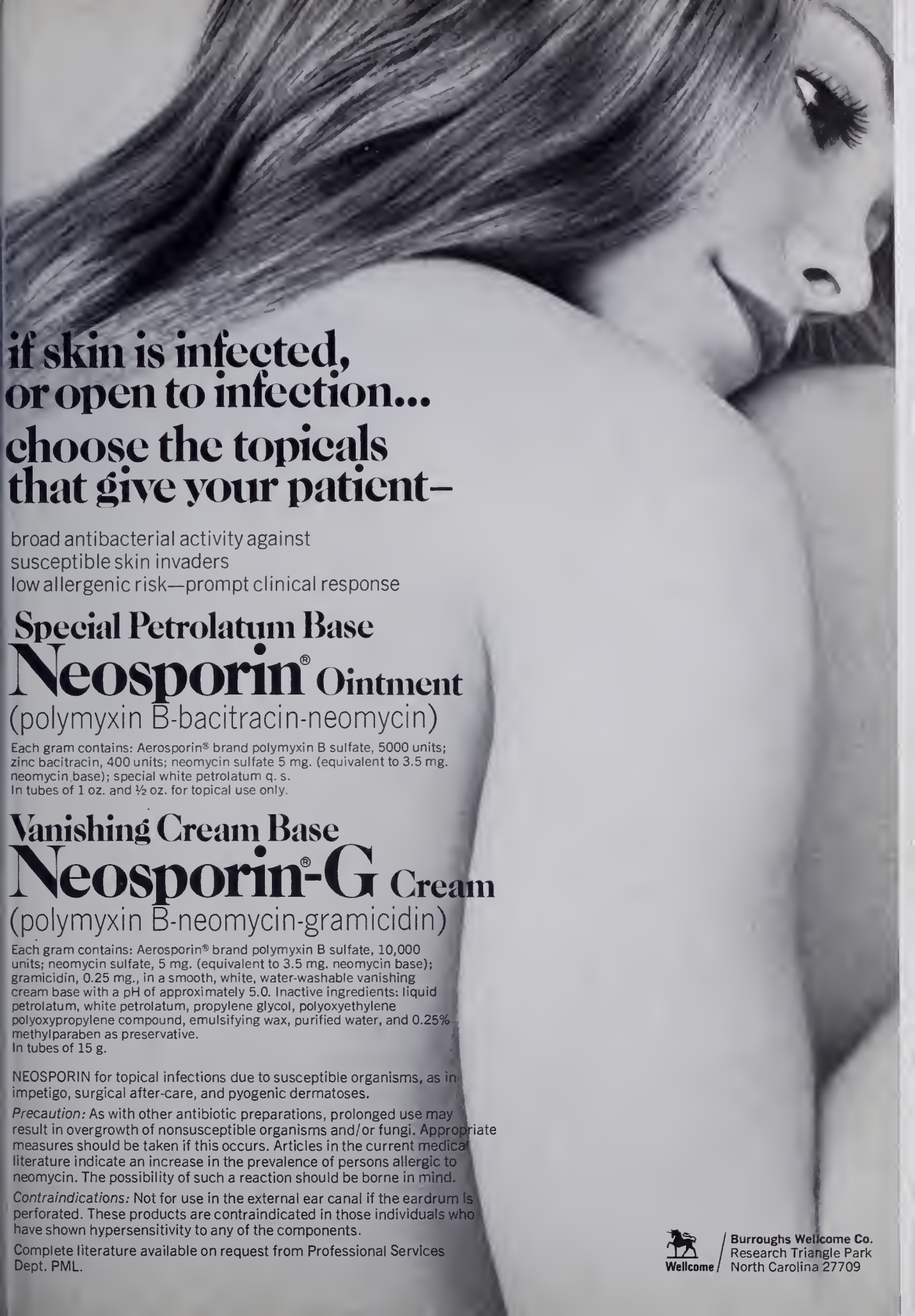
Lazenby, William D., present Opelika to 121 North 20th Street, Opelika, Alabama 36801.

Madison County

Cosby, Joseph C., present Huntsville to 2236 Avanti Lane, Birmingham, Alabama 35226.

Lenton, John D., present Huntsville to 930 Franklin Street, Huntsville, Alabama 35801.

(Continued on Page 123)



**if skin is infected,
or open to infection...
choose the topicals
that give your patient—**

broad antibacterial activity against
susceptible skin invaders
low allergenic risk—prompt clinical response

Special Petrolatum Base
Neosporin[®] Ointment
(polymyxin B-bacitracin-neomycin)

Each gram contains: Aerosporin[®] brand polymyxin B sulfate, 5000 units;
zinc bacitracin, 400 units; neomycin sulfate 5 mg. (equivalent to 3.5 mg.
neomycin base); special white petrolatum q. s.
In tubes of 1 oz. and ½ oz. for topical use only.

Vanishing Cream Base
Neosporin[®]-G Cream
(polymyxin B-neomycin-gramicidin)

Each gram contains: Aerosporin[®] brand polymyxin B sulfate, 10,000
units; neomycin sulfate, 5 mg. (equivalent to 3.5 mg. neomycin base);
gramicidin, 0.25 mg., in a smooth, white, water-washable vanishing
cream base with a pH of approximately 5.0. Inactive ingredients: liquid
petrolatum, white petrolatum, propylene glycol, polyoxyethylene
polyoxypropylene compound, emulsifying wax, purified water, and 0.25%
methylparaben as preservative.
In tubes of 15 g.

NEOSPORIN for topical infections due to susceptible organisms, as in
impetigo, surgical after-care, and pyogenic dermatoses.

Precaution: As with other antibiotic preparations, prolonged use may
result in overgrowth of nonsusceptible organisms and/or fungi. Appropriate
measures should be taken if this occurs. Articles in the current medical
literature indicate an increase in the prevalence of persons allergic to
neomycin. The possibility of such a reaction should be borne in mind.

Contraindications: Not for use in the external ear canal if the eardrum is
perforated. These products are contraindicated in those individuals who
have shown hypersensitivity to any of the components.

Complete literature available on request from Professional Services
Dept. PML.



Burroughs Wellcome Co.
Research Triangle Park
North Carolina 27709



When you select this familiar antibiotic for IV infusion you have available a broad dosage range that hospitalized patients may need.

Intravenous Lincocin (lincomycin hydrochloride, Upjohn), with its 1.2 to 8 grams/day dosage range, covers many serious and even life-threatening infections. Lincocin is effective in infections due to susceptible strains of streptococci, pneumococci, and staphylococci. Lincocin IV therefore can be as useful in your hospitalized patients as its IM use has proved to be in your office patients. As with all antibiotics, *in vitro* susceptibility studies should be performed.

1.2 to 8 grams/day IV dosage range:

Most hospitalized patients with uncomplicated pneumonias respond satisfactorily to 1.2 to 1.8 grams/day of Lincocin IV. These doses may have to be increased for more serious infections.

In life-threatening situations as much as 8 grams/day has been administered intravenously to adults.

In usual IV doses, Lincocin (lincomycin hydrochloride, Upjohn) should be diluted in 250 ml or more of normal saline solution or 5% glucose in water. But when 4 grams or more per day is given, Lincocin should be diluted in not less than 500 ml of either solution, and the rate of administration should not exceed 100 ml/hour. Too rapid intravenous administration of doses exceeding 4 grams may result in hypotension or, in rare instances, cardiopulmonary arrest.

Effective gram-positive antibiotic:

Lincocin IV is effective in respiratory tract, skin and soft-tissue, and bone



fections caused by susceptible strains of pneumococci, streptococci, and staphylococci, including penicillin-resistant strains. Staphylococcal strains resistant to Lincocin (lincomycin hydrochloride, Upjohn) have been reported. Before initiating therapy, culture and susceptibility studies should be performed. Lincocin has proved valuable in treating patients hypersensitive to penicillin or cephalosporins, since Lincocin does not share antigenicity with these compounds. However, hypersensitivity reactions have been reported, some of these in patients known to be sensitive to penicillin.

Well tolerated at infusion site: Lincocin intravenous infusions have not produced local irritation or phlebitis, when given as recommended. Lincocin is usually well tolerated in patients who are hypersensitive to other drugs. Nevertheless, Lincocin should be used cautiously in patients with asthma or significant allergies.

In patients with impaired renal function, the recommended dose of Lincocin should be reduced to 25–30% of the dose for patients with normal kidney function. Its safety in pregnant patients and in infants less than one month of age has not been established.

Lincocin may be used with other antimicrobial agents: Since Lincocin is stable over a wide pH range, it is suitable for incorporation in intravenous infusions; it also may be

administered concomitantly with other antimicrobial agents when indicated. However, Lincocin should not be used with erythromycin, as *in vitro* antagonism has been reported.

Lincocin®

Sterile Solution (300 mg per ml)

(lincomycin hydrochloride, Upjohn)

For further prescribing information, please see following page.





Sterile Solution (300 mg. per ml.)

Lincocin[®]

(lincomycin hydrochloride, Upjohn)

Up to 8 grams per day by IV infusion for
hospitalized patients with life-threatening infections.

Lincocin is effective in infections due to
susceptible strains of streptococci, pneumococci,
and staphylococci. As with all antibiotics,
in vitro susceptibility studies should be performed.

Each
preparation
contains:

Lincomycin
hydrochloride
monohydrate
equivalent to
lincomycin base

250 mg Pediatric Capsule 250 mg
500 mg Capsule 500 mg
*Sterile Solution per 1 ml 300 mg
Syrup per 5 ml 250 mg

*Contains also: Benzyl Alcohol 9 mg; and,
Water for Injection—q.s.

Lincocin (lincomycin hydrochloride) is indicated in infections due to susceptible strains of staphylococci, pneumococci, and streptococci. *In vitro* susceptibility studies should be performed. Cross resistance has not been demonstrated with penicillin, ampicillin, cephalosporins, chloramphenicol or the tetracyclines. Some cross resistance with erythromycin has been reported. Studies indicate that Lincocin does not share antigenicity with penicillin compounds.

CONTRAINDICATIONS: History of prior hypersensitivity to lincomycin or clindamycin. Not indicated in the treatment of viral or minor bacterial infections.

WARNINGS: CASES OF SEVERE AND PERSISTENT DIARRHEA HAVE BEEN REPORTED AND HAVE AT TIMES NECESSITATED DISCONTINUANCE OF THE DRUG. THIS DIARRHEA HAS BEEN OCCASIONALLY ASSOCIATED WITH BLOOD AND MUCUS IN THE STOOLS AND HAS AT TIMES RESULTED IN AN ACUTE COLITIS. THIS SIDE EFFECT USUALLY HAS BEEN ASSOCIATED WITH THE ORAL DOSAGE FORM BUT OCCASIONALLY HAS

BEEN REPORTED FOLLOWING PARENTERAL THERAPY. A careful inquiry should be made concerning previous sensitivities to drugs or other allergens. Safety for use in pregnancy has not been established and Lincocin (lincomycin hydrochloride) is not indicated in the newborn. Reduce dose 25 to 30% in patients with severe impairment of renal function.

PRECAUTIONS: Like any drug, Lincocin should be used with caution in patients having a history of asthma or significant allergies. Overgrowth of nonsusceptible organisms, particularly yeasts, may occur and require appropriate measures. Patients with pre-existing monilial infections requiring Lincocin therapy should be given concomitant antimonilial treatment. During prolonged Lincocin therapy, periodic liver function studies and blood counts should be performed. Not recommended (inadequate data) in patients with pre-existing liver disease unless special clinical circumstances indicate. Continue treatment of β -hemolytic streptococci infections for 10 days to diminish likelihood of rheumatic fever or glomerulonephritis.

ADVERSE REACTIONS: *Gastrointestinal*—Glossitis, stomatitis, nausea, vomiting. Persistent diarrhea, enterocolitis, and pruritus ani. *Hemopoietic*—Neutropenia, leukopenia, agranulocytosis, and thrombocytopenic purpura have been reported. *Hypersensitivity reactions*—Hypersensitivity reactions such as angioneurotic edema, serum sickness, and anaphylaxis have been reported, sometimes in patients sensitive to penicillin. If allergic reaction occurs, discontinue drug. Have epinephrine, corticosteroids, and antihista-

mines available for emergency treatment. *Skin and mucous membranes*—Skin reactions, urticaria, vaginitis, and rare instances of folliculitis and vesiculobullous dermatitis have been reported. *Liver*—Although no direct relationship to liver dysfunction is established, jaundice and abnormal liver function (particularly serum transaminase) have been observed in a few instances. *Cardiovascular*—Instances of hypotension following parenteral administration have been reported particularly after too rapid IV administration. Rare instances of cardiopulmonary arrest have been reported after too rapid administration. If 4.0 grams or more are administered IV, dilute in 500 ml of fluid and administer no faster than 100 ml per minute. *Special senses*—Tinnitus and vertigo have been reported occasionally. *Local reactions*—Excellent local tolerance demonstrated intramuscularly administered Lincocin (lincomycin hydrochloride). Reports of local irritation following injection have been infrequent. Intravenous administration of Lincocin in 250 to 500 ml of 5% glucose in distilled water or normal saline has produced no local irritation or phlebitis.

HOW SUPPLIED: 250 mg and 500 mg Capsules—bottles of 24 and 100. Sterile Solution, 300 mg per ml—2 and 10 ml ampules and 2 ml syringe. Syrup, 250 mg per 5 ml—60 ml and pint bottles.

For additional product information, see the package insert or see your Upjohn representative.

MED B-6-S (KZL-7) 1A71

The Upjohn Company
Kalamazoo, Michigan 49001

Upjohn

AROUND THE STATE

(Continued from Page 118)

Montgomery County

Cox, Charles L., Jr., present Montgomery to 1722 Pine Street, Montgomery, Alabama 36106.

Garrick, Jean, present Montgomery to 8415 Bellona Lane, Baltimore, Maryland 21204.

Johnson, H. Cecil, present Montgomery to 2119 East South Boulevard, Montgomery, Alabama 36111.

Praytor, Hugh B., Jr., present Montgomery to 1111 East South Boulevard, Montgomery, Alabama 36111.

Reed, Josiah F., Jr., present Montgomery to 1111 East South Boulevard, Montgomery, Alabama 36111.

Williams, Thomas H., Jr., present Montgomery to 1111 East South Boulevard, Montgomery, Alabama 36111.

Tuscaloosa County

Gipson, Amos C., present Tuscaloosa to Bryce Hospital, Tuscaloosa, Alabama 35401.

Monroe, William D., present Tuscaloosa to Suite 205, Professional Building, 225 University Boulevard East, Tuscaloosa, Alabama 35401.

Walker County

Waldrop, Sam D., present Jasper to P. O. Box K, Selma, Alabama 36701.

NEW TELEPHONE NUMBERS

Camp, E. E., Madison	533-4300
Cothran, R. M., Jefferson	383-0067
Cox, C. L., Jr., Montgomery	265-8532
Habeeb, Alfred, Jefferson	933-7537
Martens, C. W., Monroe	743-3266
Monroe, W. D., Tuscaloosa	345-7868
Morris, P. W., Jefferson	933-7451
Odom, S. A., Montgomery	288-1405
Patton, I. B., Blount	625-3561
Perry, W. J., Morgan	773-2521

Praytor, H. B., Jr., Montgomery	281-4690
Pringle, B. C., Jr., Mobile	432-2626
Robinson, E. B., Jr., Jefferson	322-5391
Ross, J. S., Montgomery	265-2311
Shriner, J. F., Mobile	342-3810
Silberman, D. J., Jefferson	933-7724
Simmons, A. G., Monroe	743-3266
Smith, R. A., Jr., Monroe	743-3266
Stapleton, J. B., Houston	794-2169
Waldrop, S. D., Walker	872-8030
White, D. A., Jr., Jefferson	871-9771

ADD SPECIALTY

Morgan County

Perry, William J., Doctors' Clinic, P. O. Box 930, Hartselle, Alabama 35640. GP.

CHANGE OF SPECIALTY

Jefferson County

Finchum, Robert Newell, 801 Princeton Avenue, S. W., Suite 638, Birmingham, Alabama 35211. C.

Morris, Peter W., 909 South 18th Street, Birmingham, Alabama 35205. I-Hematology.

Silberman, Donald J., Suite 522, Medical Towers, 1717-11th Avenue South, Birmingham, Alabama 35205. P (General & Pediatric).

Whitehead, John S., 800 Montclair Road, Birmingham, Alabama 35213. I-Hematology.

Madison County

Lenton, John D., 930 Franklin Street, Huntsville, Alabama 35801. I.

Mobile County

Pringle, B. Clifford, Jr., 1720 Springhill Avenue, Mobile, Alabama 36604. R.

Member Transferred

Montgomery County

Ross, James S., P. O. Box 4008, Montgomery, Alabama 36104, from member of Dallas County Medical Society to member of Montgomery County Medical Society. PH.

ALCOHOLISM DRUG ADDICTION AND OTHER DRUG DEPENDENCY CONDITIONS

Willingway Hospital



Luxurious Homelike Atmosphere

A unique original program of recovery with a different approach.

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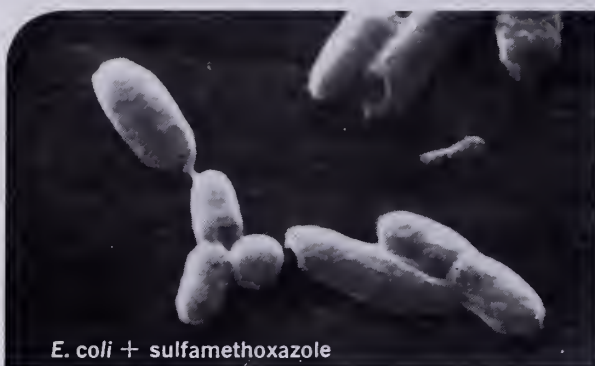
Encounter under the Scanning Electron Microscope



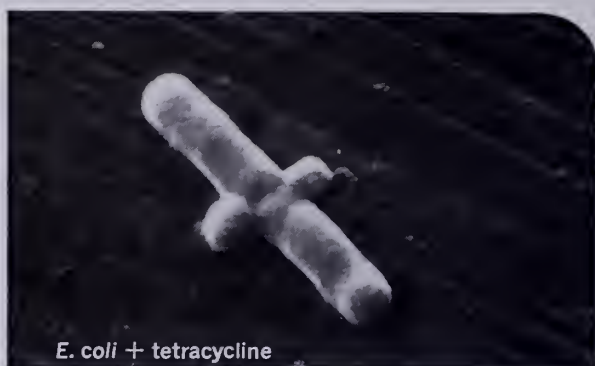
SEM reveals changes in *E. coli* exposed to antibacterial agents

The Scanning Electron Microscope (SEM) is the only instrument which gives 3-dimensional views on a microscopic level. This permits the surface morphology of microorganisms to be observed in

detailed perspective. Changes in surface morphology of *E. coli* exposed to various antimicrobial agents are seen on the following page. An SEM photomicrograph of normal control *E. coli* appears above.



E. coli + sulfamethoxazole



E. coli + tetracycline



E. coli + cephalothin



E. coli + ampicillin

Different modes of antibacterial action — Similar changes in morphology

As part of a series of experiments,¹⁻³ strains of *E. coli* proven susceptible to each antibacterial agent were exposed to 1 MIC of the respective antibacterials for a three-hour period. Included were cell-wall-active drugs, ampicillin and cephalothin; a drug interfering with intracellular protein synthesis, tetracycline; and a chemical agent which acts by interference with para-aminobenzoic acid, sulfamethoxazole.

As seen above, elongation of the bacilli, mid-cell defects and spheroplast-like forms may be appreciated with the SEM technique. These changes in bacterial morphology were similar... regardless of the antibacterial agent used and irrespective of

its mechanism of action.

"At present, the significance of these observations in clinical infection must be considered with caution, but it is hoped that these data will stimulate a reevaluation of present concepts of the nature and role of morphological variants of bacteria exposed to a variety of antibacterial factors."²

References:

1. Klainer, A. S.; Fass, R. J., and Perkins, R. L.: Scientific Exhibit presented at the 25th American Medical Association Clinical Convention, New Orleans, La., Nov. 28-Dec. 1, 1971.
2. Klainer, A. S., and Perkins, R. L.: *Antimicrob. Agents Chemother.*, 1:164, 1972.
3. Klainer, A. S.: Data on file, Hoffmann-La Roche Inc., Nutley, N.J.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Effective in acute, recurrent or chronic urinary tract infections (primarily pyelonephritis, pyelitis and cystitis) due to susceptible organisms (usually *E. coli*, *Klebsiella-Aerobacter*, *Staphylococcus aureus*, *Proteus mirabilis*, and, less frequently, *Proteus vulgaris*) and in the absence of obstructive uropathy or foreign bodies.

Note: Since *in vitro* sulfonamide sensitivity tests are not always reliable, carefully coordinate *in vitro* sulfonamide sensitivity tests with bacteriologic and clinical response. Add aminobenzoic acid to culture media of patients receiving sulfonamides. The increasing frequency of resistant organisms is a limitation of usefulness of antibacterial agents, including sulfonamides, especially in chronic or recurrent urinary tract infections.

Blood levels should be measured in patients receiving sulfonamides for serious infections, since there may be wide variations with identical doses; 20 mg/100 ml should be the maximum total sul-

famide level, as adverse reactions occur more frequently at this level.

Contraindications: Sulfonamide hypersensitivity; infants less than 2 months of age (except adjunctively with pyrimethamine congenital toxoplasmosis); pregnancy at term and during nursing period.

Warnings: Safe use in pregnancy has not been established. Teratogenicity potential has not been thoroughly investigated. Sulfonamides will not eradicate or prevent sequelae to group A streptococcal infections, i.e., rheumatic fever, glomerulonephritis. Due to hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been reported; early clinical signs such as sore throat, fever, pallor, purpura or jaundice may indicate serious blood disorders. Complete blood counts and urinalysis should be performed during therapy. Careful microscopic examination are recommended frequently during sulfonamide therapy. Clinical data are insufficient on prolonged or recurrent therapy in chronic renal diseases of children under 6 years.

Encounter in Clinical Practice

Control of primary bacterial offenders

Antibacterial Gantanol® (sulfamethoxazole) controls susceptible strains of *E. coli* and other gram-negative and gram-positive organisms

often implicated in acute nonobstructed pyelonephritis and cystitis.

Prompt antibacterial blood and urine levels

In from 2 to 3 hours after the initial 2-Gm adult dose, antibacterial levels are present in

both the blood and urine.

B.I.D./T.I.D. dosage for around-the-clock coverage

Subsequent 1-Gm doses provide up to 12 hours of antibacterial coverage. More severe u.t.i. may require a q. 8 h. dosage regimen. Either schedule provides coverage during the waking

and sleeping hours—especially important during hours of sleep when normal urinary retention tends to favor bacterial proliferation.

Also effective in nonobstructed chronic and recurrent u.t.i.

It is not uncommon for the elderly and the debilitated to develop chronic and/or recurrent nonobstructed urinary tract infections such as pyelonephritis and cystitis. Such cases often re-

spond satisfactorily to Gantanol. The increasing frequency of resistant organisms is a limitation of usefulness of antibacterial agents, including sulfonamides, especially in chronic or recurrent u.t.i.

Your Option: Tablets or Suspension

Either dosage form—the Tablets or the pleasant-tasting, cherry-flavored Suspension—can provide the dependable antibacterial activity necessary to control susceptible nonobstructed cystitis and pyelonephritis. Symptomatic improvement may usually be expected in 24 to 48 hours. The usual precautions with sulfonamide

therapy should be observed, including adequate fluid intake. Gantanol (sulfamethoxazole) is generally well tolerated with relative freedom from complications; the most common side effects are nausea, vomiting and diarrhea. Frequent c.b.c.'s and urinalyses with microscopic examination are recommended.

In nonobstructed cystitis and pyelonephritis due to susceptible organisms

Gantanol[®]
(sulfamethoxazole)
Basic Therapy

Precautions: Use with caution in patients with impaired renal hepatic function, severe allergy, bronchial asthma and in glucose-6-phosphate dehydrogenase-deficient individuals. In the latter, dose-related hemolysis may occur. Maintain adequate fluid intake to prevent crystalluria and stone formation.

Adverse Reactions: *Blood dyscrasias:* agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, hemolytic anemia, purpura, prothrombinemia and methemoglobinemia; *allergic reactions:* exanthema multiforme (Stevens-Johnson syndrome), skin eruptions, dermatitis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival inflammation, scleral injection, photosensitization, arthralgia and allergic myositis; *gastrointestinal reactions:* nausea, emesis, abdominal pains, diarrhea, anorexia, pancreatitis and stomatitis; *C.N.S. reactions:* headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia; and *other reactions:* drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L.E. phenomenon. Due to

certain chemical similarities with some goitrogens, diuretics (acetazolamide and thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia. Cross-sensitivity with these agents may exist.

Dosage: Systemic sulfonamides are contraindicated in infants under 2 months of age, except adjunctively with pyrimethamine in congenital toxoplasmosis. Usual dosage is as follows:

Adults—2 Gm (4 tabs or teasp.) initially, then 1 Gm (2 tabs or teasp.) b.i.d. or t.i.d. depending on severity of infection. *Children*—0.5 Gm (1 tab or teasp.)/20 lbs of body weight initially, followed by 0.25 Gm/20 lbs (½ tab or teasp.) b.i.d. Maximum dose for children should not exceed 75 mg/kg/24 hrs.

Supplied: Tablets, 0.5 Gm sulfamethoxazole; Suspension, 0.5 Gm sulfamethoxazole/teaspoonful.



Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110

1972 Graduates Of The University of Alabama In Birmingham School Of Medicine



W. M. McClellan
Brundidge



R. C. McCoy
Hueytown



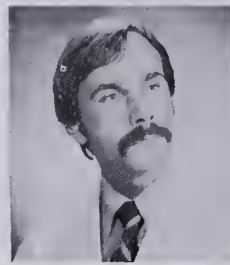
D. P. Owens
Birmingham



W. M. Patterson
Gadsden



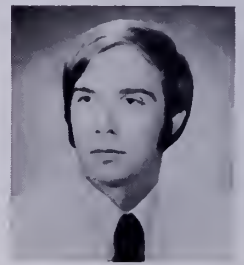
J. A. Meadows, III
Birmingham



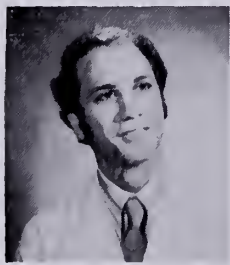
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Mobile



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Tuscaloosa



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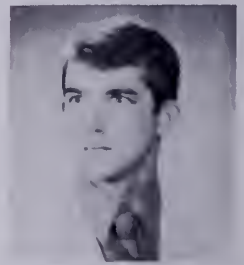
T. C. Myers
Mobile



R. W. Orso
Bessemer



F. G. Ransom
Anniston



W. M. Reid, II
Mobile

(Continued on Page 130)

Hackie Hemorrhoids

Mr. H. C., 40, taxicab driver, married with four children. Complains of anorectal pain, itching and irritation. Works long hours often in extreme heat in non-air conditioned cab. Sweats a great deal. Sudden perianal swelling two days ago. Similar episode when he was 24 years old. Examination reveals large prolapsing dematous internal and external hemorrhoids.



a typical
proctological
patient

to help
relieve the pain,
itching,
burning associated
with this and
similar anorectal
conditions

prescribe

**Anusol-
HC**[®] hemorrhoidal
suppositories
with hydrocortisone
acetate

Each suppository contains hydrocortisone acetate 10 mg, bismuth subgallate 2.25%, bismuth resorcin compound 1.75%, benzyl benzoate 1.2%, Peruvian balsam 1.8%, zinc oxide 11.0%, and boric acid 5.0%, plus the following inactive ingredients: bismuth subiodide, calcium phosphate, and coloring in a bland hydrogenated vegetable oil base.

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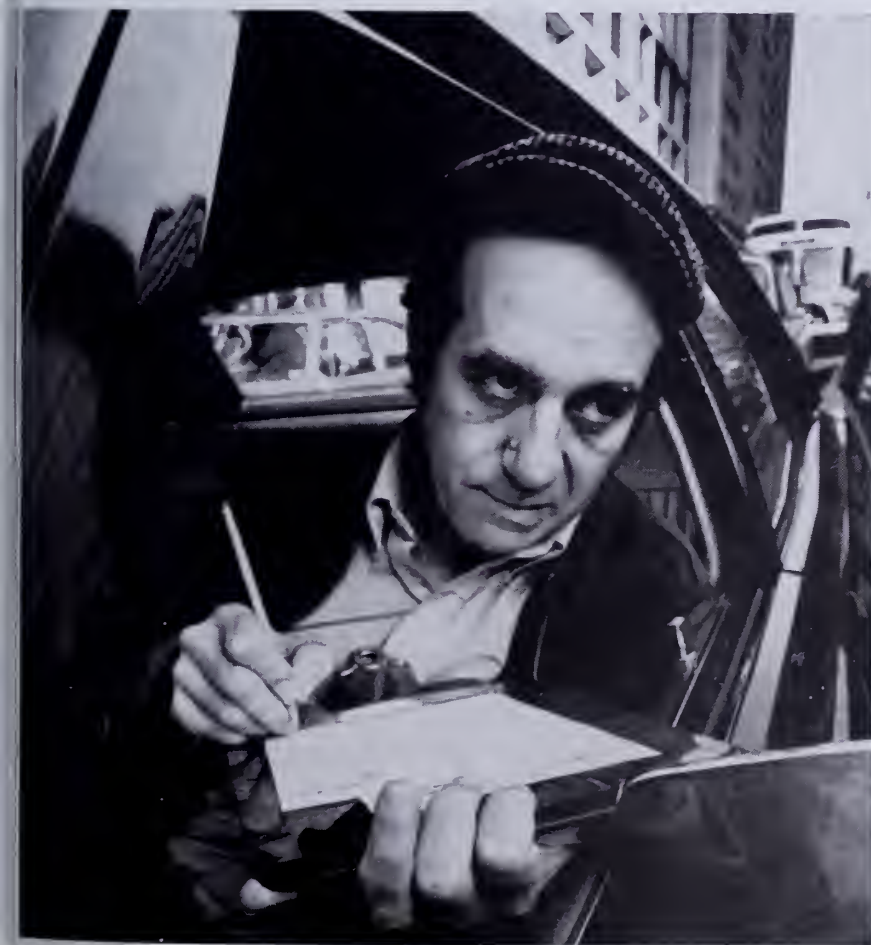
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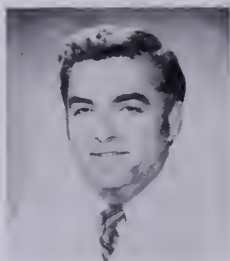
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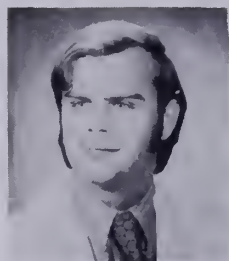
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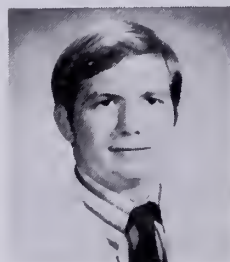
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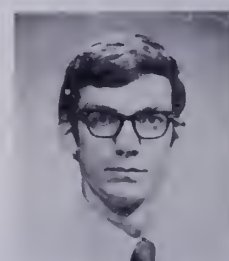
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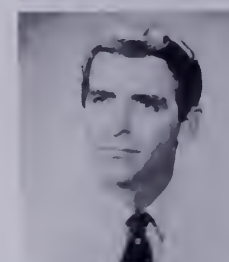
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Caution: During treatment it is recommended that the patient refrain from sexual intercourse or the husband wear a condom to avoid re-infection.

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Store under refrigeration to insure full potency.

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References: 1. Olsen, J.R.: *Journal-Lancet* 85:287 (July) 1965. 2. Giorlando, S.W.: *Ob/Gyn Dig.* 13:32 (Sept.) 1971. 3. Decker, A.: Case Reports on File, Medical Department, Julius Schmid. 4. Giorlando, S.W., Torres, J.F., and Muscillo, G.: *Am. J. Obst. & Gynec.* 90:370 (Oct. 1) 1964. 5. Lechevalier, H.: *Antibiotics Annual* 1959-1960. New York, Antibiotica Inc., 1960. pp. 614-618. 6. Friedel, H.J.: *Maryland M.J.*, 15:36 (Feb.) 1966.

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Drug Deaths In Jefferson County, Alabama

James A. Davis, Jr., B. S.*

Thomas J. Alford, B. S.

During the past ten years, Philadelphia, Pennsylvania has shown a 1300 per cent⁴ increase in fatalities related only to narcotic drug abuse. New York City has shown a 400 per cent increase over the same time period with over 1,000 people dying as a direct result of narcotic abuse in 1970⁵. Jefferson County, Alabama, recorded a 400 per cent increase in narcotic related fatalities over only the past three years¹¹. The spiraling increase in the incidence of drug associated fatalities is recognized today as a serious problem, especially in the younger age groups of our large metropolitan centers. There is very little published information concerning drug related fatalities in larger Southern cities, despite the abundance of literature concerning the problem of drug abuse. The methods of reporting and recording drug associated deaths vary from state to state and city to city. This makes the

problem of comparing data difficult. For example, figures from New York City and Philadelphia do not include suicides and accidental overdosage involving non-narcotic drugs. The purpose of this paper is to present the data recorded in Jefferson County, Alabama, and compare this to some of the large urban centers from which comparable data could be obtained.

Jefferson County, Alabama, comprises an area of approximately 118,000 sq. miles and has a population of about 650,000 people. Somewhat more than 300,000 of these live in the city of Birmingham which is ranked 45th in the nation according to population. The population of Jefferson County is 68 per cent white and 32 per cent non-white, the population of the City of Birmingham is 58 per cent white and 42 per cent non-white¹¹. Although the study includes data from Jefferson County as a whole, the majority of drug related deaths occurred within the greater metropolitan area of Birmingham not in the more rural outlying communities which comprise the County.

The data for this paper was taken from

*Mr. Davis and Alford are third year students of the Medical School, University of Alabama, Birmingham.

From the Department of Pathology, Carraway Methodist Medical Center, Birmingham, Alabama.

DRUG DEATHS IN JEFFERSON COUNTY

the Annual Statistical Report of the Jefferson County Public Health Department, Bureau of Vital statistics¹¹. The files and records of the Jefferson County Coroner's Office for the years 1969-71 were reviewed in detail for cases of drug associated death. The data from Cuyahoga Co., Ohio (Cleveland) was taken from the Annual Coroner's Statistical Report³. Statistical data was also obtained through the office of the Medical Examiner of Philadelphia, Pennsylvania⁴ and the New York City Medical Examiner's Office⁵.

Fatalities from drug abuse can be divided into two principal categories; accidental overdose and suicidal overdose. The drugs grouped together as sedatives (barbiturates, meprobamate, and glutethamide) are used more frequently in suicidal overdose; whereas, the opiate group of drugs appear more frequently as an accidental overdose.

TABLE I

Drug Deaths in Jefferson Co., Cuyahoga Co., and Philadelphia Co.

	Jefferson Co. Birmingham			Cuyahoga Co. Cleveland		Phila.
	1969	1970	1971	1969	1970	1969
Sedative						
Barbiturate	7	2	5	18	23	94
Barbiturate + EtOH	4	2	1	5	14	48
Other*	2	1	2	12	5	144
Salicylate	1	1	1	3	4	41
Organic Bases						
Narcotics (Opium						
Alkaloids)			5	10	22	216
Other**			3	2	4	
Stimulants						
Amphetamine						58
Combinations			1	11	31	
Miscellaneous***			1	2		
Unknown	1	3		1	5	
Total	15	9	19	64	108	601
Deaths Per 100,000 Population	2.34	1.39	2.94	3.65	6.22	30.82

*Glutethamide, Meprobamate, Thorazine, Ethchlorvynol, Phenothiazine Chloral Hydrate, Papaverine

**Elavil, Mellaril

***Digitalis, Fluothane, Insulin

The data included in Table I is broken down into four major groups of drugs. The sedatives include the barbiturates and the non-barbiturate hypnotics. Aspirin accounts for most of the deaths due to salicylates. The third large group of drugs, the organic bases, includes the narcotics or opium alka-

loids and their synthetic derivatives. Also included in this group are a variety of organic bases, chlorpromazine, amitriptyline HCl, thioridazine, etc. Stimulants are mainly represented by the amphetamines. Hallucinogens, LSD and marijuana, would constitute another group of drugs which are abused but these have not been recognized as a direct cause of death in Jefferson County.

Table I points out interesting facts about the differing drug problems existing in the areas studied. In the period reviewed, sedatives accounted for 60 per cent, 47 per cent, and 44 per cent of drug related deaths in Jefferson County, Philadelphia, and Cuyahoga Counties respectively; while narcotics accounted for 11 per cent, 35 per cent, and 18 per cent of drug related deaths in these areas. It is also interesting to note that in Birmingham there were no recorded fatalities due to narcotism in the years 1969 and 1970, but five in 1971. Cleveland showed a two-fold increase in narcotic related deaths from 1969 to 1970. In Philadelphia the increase was even more dramatic showing a rise of 140 per cent from 1969 to 1971. Evidence of a more serious drug problem in Philadelphia than in either Jefferson or Cuyahoga Counties is the fact that while there are no amphetamines in either of the latter, amphetamines account for almost ten per cent of drug related deaths in Philadelphia⁴.

Drug related deaths are becoming an increasing problem. This fact is demonstrated by the rise in the number of drug related deaths in each of the cities studied. The Jefferson County figures show an approximately 25 per cent increase and Cuyahoga County a 70 per cent rise in the number of drug related deaths^{3, 11}. Although the figures for New York and Philadelphia are not complete, these cities show a 25 per cent increase in deaths from narcotism alone during the period from 1969 to 1971^{5, 4}. Another serious factor in narcotic abuse is the striking increase in violent deaths related to narcotic addiction, especially narcotic related homi-

DRUG DEATHS IN JEFFERSON COUNTY

cide. In New York City of 3800 victims of homicides during 1969-1971 500 were narcotic addicts¹¹. Philadelphia had an almost unimaginable 222 per cent increase in narcotic related homicides from 1970 to 1971⁴. Similar figures may be obtained in Jefferson County substituting alcohol as the drug index.

Tables II, III, and IV are concerned only with Jefferson County and present the drug related problems into categories of age, sex, race, type of drug, and suicidal attempt verses accidental overdose. In Table II the data reveals that 58.2 per cent of all drug deaths occur in white females and 83.7 per cent of drug related deaths occur in the white race. The suicide rate also reflects larger drug use in the white community with 70 per cent of the suicides by drugs involving white females and 90 per cent of drug suicides occurring in whites.

In accidental deaths by drugs the white female also predominates with slightly less than 50 per cent of the deaths but does not have any death associated with narcotic abuse. In this category the white male is involved in three out of five of the deaths with the black male and female having one case each. The sedative class of drugs comprises the bulk of both accidental and suicidal deaths with 85 per cent of the suicides occurring by means of sedatives and 45.5 per cent of the accidental overdoses involving sedatives. It is interesting to note that all deaths due to narcotic abuse are accidental overdoses and none involve a detected suicidal intent.

Table III shows the main age groups for suicides are the 25-39 age group and the 40-55 year old group with each bracket having 35 per cent of the total suicides recorded. As seen from Table II, the white female accounts for most of these deaths. Accidental drug overdoses are fairly evenly spread throughout the various age ranges with white, male and female, representing 82.6 per cent of these deaths.

TABLE II

Drug Related Deaths, Jefferson County, Alabama, 1969-1971, Illustrating Accidental and Suicidal Intent

	Sedative	Narcotic	Other*	Total	%
White Male Accident Suicide	3 3	3 0	1 1	7 4	25.5
White Female Accident Suicide	6 12	0 0	5 2	11 14	58.2
Black Male Accident Suicide	1 0	1 0	1 0	3 0	7.0
Black Female Accident Suicide	0 2	1 0	1 0	2 2	9.3
Total Accident Suicide	10 17	5 0	8 3	23 20	100.0

*Other - Aspirin, Digitalis, Amitriptyline, Unknown

TABLE III

Drug Related Deaths, Jefferson County, Alabama 1969-1971, Illustrating Age and Accidental or Suicidal Intent

Age	0 - 14	15 - 24	25 - 39	40 - 55	over 55	Total
White Male Accident Suicide	0 0	2 0	0 0	3 2	2 2	7 4
White Female Accident Suicide	2 0	1 2	2 6	3 5	2 2	10 15
Black Male Accident Suicide	1 0	0 1	1 0	0 0	0 0	2 1
Black Female Accident Suicide	1 0	1 0	0 1	0 0	0 1	2 2
Total Accident Suicide	4 0	4 3	3 7	6 7	4 5	21 22

TABLE IV

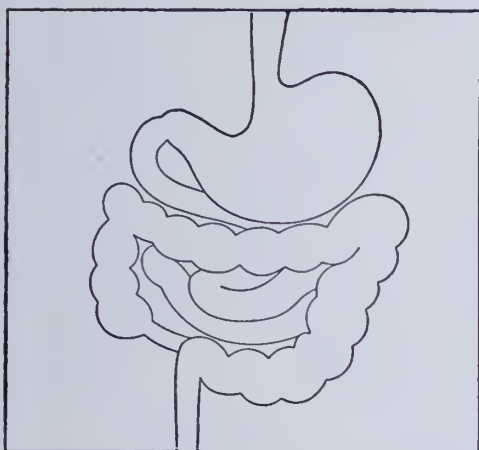
Drug Related Deaths, Jefferson County, Alabama, 1969-1971, Illustrating Age and Type of Drug

Age	0 - 14			15 - 24			25 - 39			40 - 55			over 55		
Drug	S	N	O	S	N	O	S	N	O	S	N	O	S	N	O
White Male	0	0	0	0	2	0	0	0	0	4	1	0	2	0	2
White Female	1	0	1	1	0	2	7	0	1	7	0	1	2	0	2
Black Male	0	0	1	0	1	0	1	0	0	0	0	0	0	0	0
Black Female	0	0	1	0	1	0	1	0	0	0	0	0	1	0	0
Total	1	0	2	1	4	2	9	0	1	11	1	1	5	0	4

S - Sedative N - Narcotic O - Other - Aspirin, Digitalis, Amitriptyline, Unknown

(Continued on Page 138)

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Contraindications: Anticholinergics should not be used in patients with glaucoma, known prostatic hypertrophy, or pyloric obstruction. Urinary retention may indicate the presence of prostatic hypertrophy. If it occurs, the dose should be reduced or the drug withdrawn. Also contraindicated in patients with known hypersensitivity to one of the components.

Side Effects: Dryness of the mouth, blurred vision, dysuria, skin rash, constipation or drowsiness may occur.

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(Continued from Page 136)

Table IV reveals the drug types used by the various age groups. As would be expected from the previously discussed data, sedatives heavily predominate in most groups. A significant variation, however, is in the 15-24 year old group in which narcotic deaths account for 57 per cent of the deaths in this bracket. This age group also accounted for 80 per cent of all narcotic deaths.

Case Reports

Our study includes two interesting cases of sudden and unexpected death which are compatible with an entity known as "blue velvet."

Case #1—Mr. C. W. was a 22 year old white male who shared an apartment with several other persons. On the night of his death the police received an anonymous phone call and on investigation found the man dead in his apartment. Several types of medication were found in his apartment, among them being barbiturates (Trianal, Secobarbital) and amphetamines (Methamphetamine HCl, Dexamyl). With these drugs were found tablespoons which were charred on the convex surface as though material had been boiled in them. There were also numerous syringes and some unidentified powder.

On inspection the body showed abrasions and contusions on the nose and face and several tattoos on the left leg. On the dorsum of both hands and in the antecubital fossa on the right side there were numerous needle marks which traced the course of the veins. The veins underneath these areas were very firm and cord-like. The dorsum of both feet had a similar appearance.

The only organs which showed any remarkable features were the lungs. Both were extremely heavy weighing 990 and 900 grams on the right and left sides respectively. On section the lungs were grayish pink in color and frothy fluid, along with what appeared to be purulent exudate, was expressed easily from the surface. Microscopic

study showed focal areas of granulomata in the alveolar walls. In these areas there was foreign material which appeared to be crystalline. This material occurred in foreign body giant cells in many instances. When viewed through polarized light the crystals were birefringent. Around this material were some foamy histiocytes surrounded by lymphocytes and a few plasma cells, see figures 1 and 2. Toxicology studies of liver revealed traces of Demerol and barbiturate.

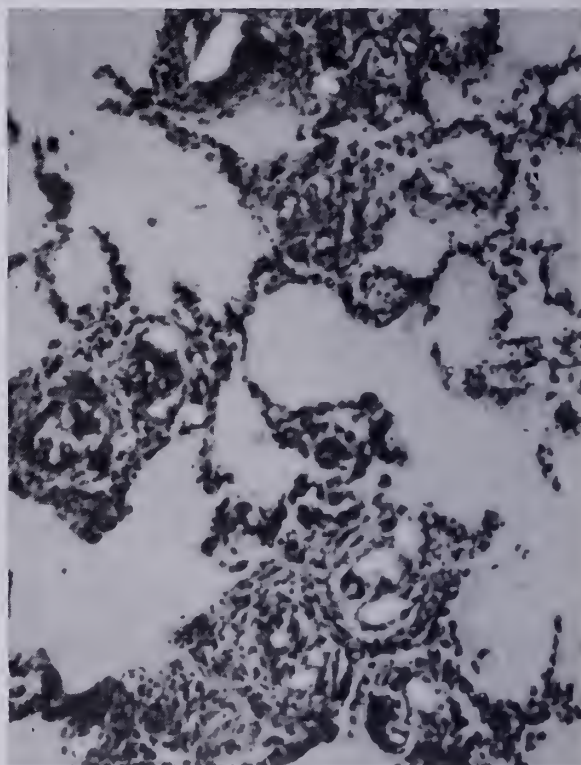


Figure 1—Lung, Hematoxylin and Eosin, made with polarized light, reduced 100 x.

Case #2—Mr. S. T. was a 20 year old white male with a strong history of illegal drug association. He exhibited numerous needle puncture wounds in both antecubital fossa, on the back of both hands, and in the area of the right wrist.

The lungs were the only organ of note in this case. The right and left lungs weighed 650 and 600 grams respectively. They were both heavy, wet, and free fluid extruded from the cut surfaces. Microscopically the lungs showed multiple foreign body granulomata. There were also many multinucleated giant

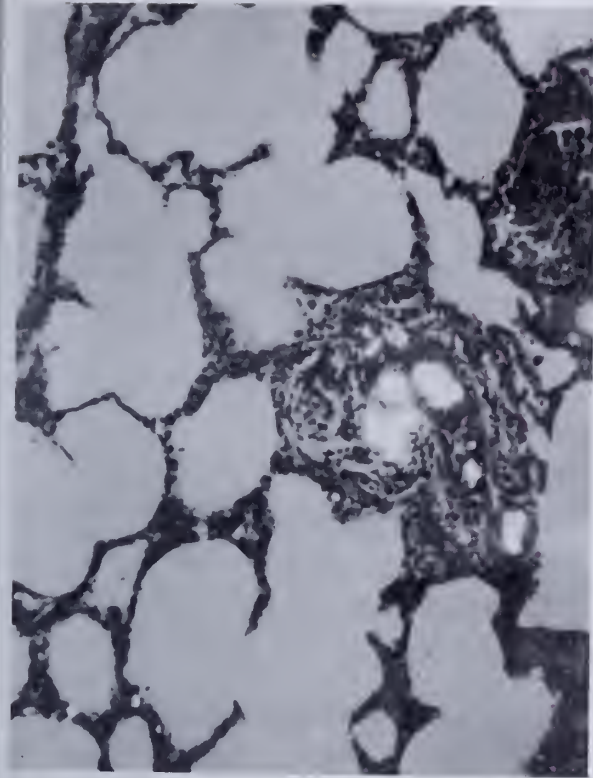


Figure 2—Lung, Hematoxylin and Eosin, made with polarized light, reduced 400 x.

cells with fiber-like particles of birefringent material within them. Postmortem blood levels of Demerol were recorded at 7.1 mg per cent.

This type of sudden death syndrome has been found in mainliners (i.e. those using the intravenous route of drug administration) and is associated with a certain combination of drugs: an antihistaminic, pyribenzamine, plus a narcotic agent such as morphine, paragoric concentrate, or barbiturates alone. The name "blue velvet" is derived from the peribenzamine tablet which is blue when intended for oral use². When Seconal is used the descriptive term is "red devil." Peribenzamine and Seconal contain particulate matter in the form of talc and starch respectively⁸. Although harmless when taken orally, these particles are entrapped by pulmonary lymphatics when injected intravenously and a foreign body response in the lungs is elicited. This response consists of multiple foreign body granulomata with multinucleated giant cells containing birefringent talc and starch crys-

taloids. "Sudden death is due to right ventricular dilatation (acute cor pulmonale) as a result of prolonged right sided overload and increased vascular resistance in the lungs."²

Discussion

It has been the intention of this paper to point out the problem of death due to drug abuse in Jefferson County and compare this data to that obtained from other cities. There are a number of obstacles encountered in determining the extent of the problem of death due to drug abuse. One is the fact that anatomical and/or microscopic evidence is often non-contributory toward determining the cause of death. Toxicology reports obtained on postmortem blood and urine specimens fail to reveal the presence of lethal quantities of drugs in approximately 50 per cent of the cases⁷. Gathering comparable statistical data also proved to be a problem since other cities do not classify suicides and accidental deaths of non-narcotic drugs as deaths from drug abuse as the Jefferson County study has done.

Another factor which compounds and complicates the picture of drug related death is alcohol. The overwhelming problem of alcohol abuse is beyond the design of this paper, although one must realize that the problem of drug abuse from other drugs is insignificant when compared to that of alcohol. In Jefferson County in 1970 and 1971 there were 29 deaths from acute alcoholism and 27 deaths from all other drugs¹¹. This figure does not include those dying from natural causes due to chronic alcoholism and it does not include any deaths from accidents involving alcohol. The Medical Examiner of Virginia reports that 50 per cent of all fatal automobile accidents involve the misuse of alcohol and 55 per cent of all fatal accidents involve the misuse of alcohol⁷.

The problem of drug related death is an increasingly significant problem in our society today. The ever increasing trend to drug abuse is obvious from the data. It is very interesting to note that Birmingham,

DRUG DEATHS IN JEFFERSON COUNTY

Alabama, had almost the same number of narcotic deaths in 1971 that Philadelphia, Pennsylvania, had in 1961. If the same rate of increase persists, Birmingham can anticipate very serious drug problems in the future.

Summary

Drug related deaths in the larger Southern cities have not received emphasis. In the three years, 1969-1971, Jefferson County has shown a marked increase in fatalities related to drug abuse, especially narcotism. Case reports, included, demonstrate a heretofore unrecognized pathological phenomenon in Jefferson County known as "Blue Velvet."

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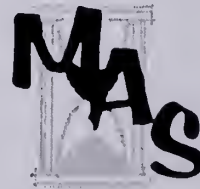
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Heroin Use Differs In Vietnam, U. S.

The pattern of heroin use by American soldiers in Vietnam differs significantly from heroin use in the United States, a Massachusetts physician reported in the current issue of *Archives of General Psychiatry*, a publication of the American Medical Association.

Norman E. Zinberg, M. D., said that the most important difference was that users in Vietnam took heroin primarily as a social gesture and were usually members of small heroin-taking groups who were disillusioned with the "non-war" and the Army. In contrast, users in the U. S. were usually "loners." Dr. Zinberg made his observations after interviewing hundreds of Army personnel during a three-week survey of heroin use and user rehabilitation efforts in Vietnam.

Other differences noted were:

Users in Vietnam were of many personality types and backgrounds and most had little previous drug experience. U. S. users had heavy previous drug experience, often showed character disorders and came from a big city with a middle class or ghetto background.

Heroin in Vietnam was strong and easy to get. It was smoked, snorted, or swallowed; until recently mainlining (intravenous injection) was rare. Heroin in the U. S. is hard to get, expensive, and is mainlined exclusively.

Dr. Zinberg said the Army's rehabilitation and treatment efforts were largely ineffective because it had not sufficiently taken into account the basic differences in heroin use in Vietnam in contrast to that in the U. S. The Army's heroin education program in its present form was a failure, he said, because it distorted known facts about the drug and its hard-sell intensity made soldiers mistrustful.

He also criticized the Army's amnesty pro-

gram for its "built-in ambiguities." The program offers the drug user one chance to turn himself in voluntarily for rehabilitation and return to his unit without prejudice after detoxification. He pointed out that the man who could give up his drug use in one attempt was already under control. The man who was genuinely drug dependent and was given one chance to get well usually could not do it.

The author is from the Department of Psychiatry, Faculty of Medicine, Harvard University, Cambridge, Mass.; Clark University, Worcester, Mass., and the Boston Psychoanalytic Institute, Boston.

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When you prescribed Orinase® (tolbutamide, Upjohn) 14 years ago, you had to rely on our experience.

An orally active hypoglycemic agent principally indicated in relatively mild, adult, maturity-onset, non-ketotic diabetes; also, as a supplement to insulin therapy in selected diabetic patients, it may effect a stabilization of labile diabetes and reduce insulin requirements. Certain patients intolerant to chlorpropamide therapy at usual therapeutic doses have subsequently been successfully managed with Orinase (tolbutamide).

Use in mild asymptomatic diabetic patients with abnormal glucose tolerance tests not responding to diet therapy may result in improvement of the glucose tolerance test.

Use in conjunction with phenformin is indicated when optimal control is not obtained with Orinase or phenformin alone.

Contraindications: Orinase alone is not effective in juvenile or growth-onset diabetes nor in unstable brittle diabetes where insulin therapy is required.

Orinase should not be used: when diabetes is complicated by acidosis, ketosis, or coma, or when a history of repeated bouts of acidosis or coma is obtained; in the presence of other acute complications such as fever, severe trauma, or infections; and in patients with severe renal insufficiency. Insulin is indicated in these circumstances.

Pregnancy Warning: The safety and usefulness of Orinase during pregnancy has not been established either from the standpoint of the mother or the fetus. Animal studies have demonstrated fetotoxic and teratogenic effects of doses of 1,000-2,500 mg./kg./day, but application to human subjects unknown. Therefore, Orinase is not recommended for the pregnant diabetic, and when administering Orinase to women of childbearing age, these facts should be borne in mind.

Precautions: Diagnostic and therapeutic measures necessary for optimal control with insulin are also necessary with Orinase. The patient on Orinase must be fully instructed: about the nature of his disease; how to prevent and detect complications; how to control his condition; not to neglect dietary restrictions; not to develop a careless attitude or disregard instructions relative to body weight, exercise, personal hygiene, and avoidance of infection; how to recognize and counteract impending hypoglycemia; how and when to test for glycosuria and ketonuria; when to use insulin; and to report to the physician immediately when he does not feel as well as usual.

Caution, very close observation, and careful adjustment of dose are necessary when: insulin is withdrawn during the period in order to avoid ketosis, acidosis, and coma; when diuretics are administered which may result in aggravation of diabetic state and increased tolbutamide requirement, thereby resulting in loss of control, or even secondary failure; treating patients with impaired hepatic and/or renal function and debilitated, malnourished, or semistarved patients in order to avoid severe hypoglycemia which may require corrective therapy over several days; and treating patients with severe trauma, infection, or surgical procedures where temporary return to insulin or additional insulin may be necessary. Response to tolbutamide is diminished in patients receiving therapy with beta blocking agents.

As some diabetics are not suitable candidates, it is essential that the physician familiarize himself with the indications, contraindications, and selection of patients for therapy.

Patients must be under continuous medical supervision during the initial test period should communicate with the physician.

Today you have your own.

If you're around 40 or 45, you've probably had quite a bit of clinical experience with Orinase.

Maybe as much as 14 years.

And that means you know quite a bit about it.

On the one hand, you know that diet and weight control are the initial and essential foundations for the management of adult-onset, non-ketotic diabetes. When these measures prove satisfactory, no additional therapy is indicated. On the other hand, you know that if these measures fail the addition

of Orinase to the regimen can often help lower blood sugar. Orinase lowers blood sugar as effectively today as it did when you first prescribed it.

You also know the importance of close monitoring of the patient. Although uncommon, severe hypoglycemia may occur if the dosage is not tailored to suit his requirements.

In short, Orinase is a drug you're familiar with, and probably have confidence in.

And that may be the best recommendation Orinase can have.

Orinase[®] 0.5 g. tablets (tolbutamide, Upjohn)

daily, and during the first month report at least once weekly physical examination and definitive evaluation. After a month, examinations are recommended monthly or as indicated. Appearance of ketonuria, increase in glycosuria, unsatisfactory lowering or persistent elevation of blood sugar, or failure to gain and hold clinical improvement indicate nonresponsiveness to Orinase (tolbutamide). Orinase does not obviate need for maintaining standard diet regulation. Uncooperative patients should be considered unsuitable for therapy. Prescriptions should be refilled only on specific instruction of physician. In treating asymptomatic diabetic patients with abnormal glucose tolerance, glucose tolerance tests should be obtained at three-month intervals. Orinase is not an oral insulin or a substitute for insulin and must not be used as sole therapy in juvenile diabetes or in diabetes complicated by acidosis or coma where insulin is indispensable.

Phenformin is prescribed in combination with Orinase, appropriate package literature should be consulted.

Adverse Reactions: Severe hypoglycemia, though uncommon, may occur and may mimic acute neurologic disorders such as cerebral thrombosis. Certain factors such as hepatic and renal disease, malnutrition, advanced age, alcohol ingestion, and adrenal and pituitary insufficiency may predispose to hypoglycemia and certain drugs such as insulin, phenformin, sulfonamides, oxyphenbutazone, salicylates, probenecid, monamine oxidase inhibitors, phenylbutazone, bishydroxycoumarin, and pyrimidol may prolong or enhance the action of Orinase and increase risk of hypoglycemia. Orinase long-term therapy has been reported to cause reduction in RAI uptake without pro-

ducing clinical hypothyroidism or thyroid enlargement and at high doses is mildly goitrogenic in animals. Photosensitivity reactions, disulfiram-like reactions after alcohol ingestion, and false-positive tests for urine albumin have been reported.

Although usually not serious, gastrointestinal disturbances (nausea, epigastric fullness, and heartburn) and headache appear to be dose related and frequently disappear with reduction of dose or administration with meals. Allergic skin reactions (pruritus, erythema, urticaria, and morbilliform or maculopapular eruptions) are transient, usually not serious, and frequently disappear with continued administration. Orinase should be discontinued if skin reactions persist. Recent reports indicate that long-term use of Orinase has no appreciable effect on body weight.

Orinase appears to be remarkably free from gross clinical toxicity; crystalluria or other renal abnormalities have not been observed; incidence of liver dysfunction is remarkably low and jaundice has been rare and cleared readily on discontinuation of drug (carcinoma of the pancreas or other biliary obstruction should be ruled out in persistent jaundice); leukopenia; agranulocytosis; thrombocytopenia; hemolytic anemia; aplastic anemia; pancytopenia; and hepatic porphyria and porphyria cutanea tarda have been reported.

Supplied: 0.5 g. Tablets—bottles of 50, 200, 500, and 1,000, and cartons of 100 in foil strips.

For additional product information, see your Upjohn representative or consult the package insert.

The Upjohn Company, Kalamazoo, Michigan 49001

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Upjohn

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During anginal attacks, patients may suffer intense apprehension. More frequently, however, they experience a continuing sense of less severe but nonetheless disproportionate anxiety.

Reduction of such clinically significant anxiety is important, since undue emotional stress may precipitate further anginal episodes.

Adjunctive Librium (chlordiazepoxide HCl) may be especially suitable for relief of clinically significant anxiety and emotional tension in anginal patients because of its generally prompt therapeutic effectiveness and wide margin of safety. In a recent double-blind randomized study, Librium (chlordiazepoxide HCl) was administered for relief of moderate anxiety in 20 anginal patients seen in office practice over a 20-week period. Symptoms of emotional distress related to anxiety were rated at base-line, one week, two weeks and monthly thereafter. Relief was obtained notably early in therapy. The clinical results demonstrated that Librium offers the coronary patient an antianxiety drug that, in the author's opinion, is both effective and safe. In general use, the most common side effects reported have been drowsiness, ataxia and confusion, particularly in the elderly and debilitated. (See summary of prescribing information.)*

Librium (chlordiazepoxide HCl) is used concomitantly with certain specific medications of other classes of drugs, such as cardiac glycosides, diuretics and antihypertensive agents, whenever anxiety is clinically significant. The drug should be discontinued after anxiety has been reduced to appropriate levels.

The positive power of
adjunctive
Librium®
(chlordiazepoxide HCl)
10-mg, 25-mg capsules
up to 100 mg daily
for moderate
to severe anxiety
accompanying angina pectoris

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Relief of anxiety and tension occurring alone or accompanying various disease states.

Contraindications: Patients with known hypersensitivity to the drug.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards.

Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

Supplied: Librium® Capsules containing 5 mg, 10 mg or 25 mg chlordiazepoxide HCl. Libritabs® Tablets containing 5 mg, 10 mg or 25 mg chlordiazepoxide.

*Levine, S.: "Angina Pectoris and Emotional Overlay," Scientific Exhibit presented at the Annual Meeting of the Maine Medical Association, Kennebunkport, Me., June 13-15, 1971.

A copy of the Levine study may be obtained from your Roche representative.



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Division of Hoffmann-La Roche Inc.
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Why send him to the islets of Langerhans?



Since sulfonylureas promote the release of insulin which is lipogenic and helps transport glucose into adipose tissue...

And since many overweight patients already have normal or high levels of endogenous insulin, why not consider DBI-TD?

It lowers blood sugar without stimulating

insulin secretion from the pancreas. And this may be important to the dieting diabetic.

In adult-onset, nonketotic diabetics uncontrolled by diet alone...

DBI-TD[®] **Geigy**
phenformin HCl

lowers blood sugar without raising blood insulin.

DBI[®] phenformin HCl
tablets of 25 mg.

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capsules of 50 and 100 mg.
Indications: Stable adult diabetes mellitus; sulfonylurea failures, primary and secondary; adjunct to insulin therapy of unstable diabetes mellitus.

Contraindications: Diabetes mellitus that can be regulated by diet alone; venile diabetes mellitus that is uncomplicated and well regulated on insulin; acute complications of diabetes mellitus (metabolic acidosis, coma, infection, gangrene); during pregnancy; immediately after surgery where insulin is indispensable; severe hepatic disease; renal disease with uremia; cardiovascular collapse (shock); after disease states associated with hypoxemia.

Warnings: Use during pregnancy is to be avoided.

Precautions: 1. *Starvation Ketosis:*

This must be differentiated from "insulin lack" ketosis and is characterized by ketonuria which, in spite of relatively normal blood and urine sugar, may result from excessive phenformin therapy, excessive insulin reduction, or insufficient carbohydrate intake. Adjust insulin dosage, lower phenformin dosage, or supply carbohydrates to alleviate this state.

Do not give insulin without first checking blood and urine sugar.

2. *Lactic Acidosis:* This drug is not recommended in the presence of azotemia or in any clinical situation that predisposes to sustained hypotension that could lead to lactic acidosis. To differentiate lactic acidosis from ketoacidosis, periodic

determinations of ketones in the blood and urine should be made in diabetics previously stabilized on phenformin, or phenformin and insulin, who have become unstable. If electrolyte imbalance is suspected, periodic determinations should also be made of electrolytes, pH, and the lactate-pyruvate ratio. The drug should be withdrawn and insulin, when required, and other corrective measures instituted immediately upon the appearance of any metabolic acidosis.

3. *Hypoglycemia:* Although hypoglycemic reactions are rare when phenformin is used alone, every precaution should be observed during the dosage adjustment period particularly when insulin or a sulfonylurea has been given in combination with phenformin.

Adverse Reactions: Principally

gastrointestinal; unpleasant metallic taste, continuing to anorexia, nausea and, less frequently, vomiting and diarrhea. Reduce dosage at first sign of these symptoms. In case of vomiting, the drug should be immediately withdrawn. Although rare, urticaria has been reported, as have gastrointestinal symptoms such as anorexia, nausea and vomiting following excessive alcohol intake. (B) 98-146-103-D (6/72)

For complete details, including dosage, please see full prescribing information.

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a new outlook in chronic pain

of moderate to severe intensity

Though Talwin® Tablets, brand of pentazocine (as hydrochloride), can be compared to codeine in analgesic efficacy, Talwin is not subject to narcotic controls. Patients receiving Talwin Tablets for prolonged periods face fewer of the consequences you've come to expect with meperidine or codeine. And that, in the long run, can mean a better outlook for your chronic-pain patient.

Talwin Tablets are:

- **Comparable to codeine in analgesic efficacy:** one 50 mg. Talwin Tablet appears equivalent in analgesic effect to 60 mg. (1 gr.) of codeine. Onset of significant analgesia usually occurs within 15 to 30 minutes. Analgesia is usually maintained for 3 hours or longer.
- **Tolerance not a problem:** tolerance to the analgesic effect of Talwin Tablets has not been reported, and no significant changes in clinical laboratory parameters attributable to the drug have been reported.
- **Dependence rarely a problem:** during three years of wide clinical use, only a few cases of dependence have been reported. In prescribing Talwin for chronic use, the physician should take precautions to avoid increases in dose by the patient and to prevent the use of the drug in anticipation of pain rather than for the relief of pain.
- **Not subject to narcotic controls:** convenient to prescribe—day or night—even by phone.
- **Generally well tolerated by most patients:** infrequently cause decrease in blood pressure or tachycardia; rarely cause respiratory depression or urinary retention; seldom cause diarrhea or constipation. If dizziness, light-headedness, nausea or vomiting are encountered, these effects tend to be self-limiting and to decrease after the first few doses. (See last page of this advertisement for a complete discussion of adverse reactions and a brief discussion of other Prescribing Information.)

50 mg. Tablets

Talwin®

brand of

pentazocine (as hydrochloride)

the long-range analgesic

a new outlook in chronic pain

of moderate to severe intensity



Contraindications: Talwin, brand of pentazocine (as hydrochloride), should not be administered to patients who are hypersensitive to it.

Warnings: *Head Injury and Increased Intracranial Pressure.* The respiratory depressant effects of Talwin and its potential for elevating cerebrospinal fluid pressure may be markedly exaggerated in the presence of head injury, other intracranial lesions, or a pre-existing increase in intracranial pressure. Furthermore, Talwin can produce effects which may obscure the clinical course of patients with head injuries. In such patients, Talwin must be used with extreme caution and only if its use is deemed essential.

Usage in Pregnancy. Safe use of Talwin during pregnancy (other than labor) has not been established. Animal reproduction studies have not demonstrated teratogenic or embryotoxic effects. However, Talwin should be administered to pregnant patients (other than labor) only when, in the judgment of the physician, the potential benefits outweigh the possible hazards. Patients receiving Talwin during labor have experienced no adverse effects other than those that occur with commonly used analgesics. Talwin should be used with caution in women delivering premature infants.

Drug Dependence. There have been instances of psychological and physical dependence on parenteral Talwin in patients with a history of drug abuse and, rarely, in patients without such a history. Abrupt discontinuance following the extended use of parenteral Talwin has resulted in withdrawal symptoms. There have been a few reports of dependence and of withdrawal symptoms with orally administered Talwin. Patients with a history of drug dependence should be under close supervision while receiving Talwin orally.

In prescribing Talwin for chronic use, the physician should take precautions to avoid increases in dose by the patient and to prevent the use of the drug in anticipation of pain rather than for the relief of pain.

Acute CNS Manifestations. Patients receiving therapeutic doses of Talwin have experienced, in rare instances, hallucinations (usually visual), disorientation, and confusion which have cleared spontaneously within a period of hours. The mechanism of this reaction is not known. Such patients should be very closely observed and vital signs checked. If the drug is reinstituted it should be done with caution since the acute CNS manifestations may recur.

Usage in Children. Because clinical experience in children under 12 years of age is limited, administration of Talwin in this age group is not recommended.

Ambulatory Patients. Since sedation, dizziness, and occasional euphoria have been noted, ambulatory patients should be warned not to operate machinery, drive cars, or unnecessarily expose themselves to hazards.

Precautions: *Certain Respiratory Conditions.* Although respiratory depression has rarely been reported after oral administration of Talwin, the drug should be administered with caution to patients with respiratory depression from any cause, severe bronchial asthma and other obstructive respiratory conditions, or cyanosis.

Impaired Renal or Hepatic Function. Decreased metabolism of the drug by the liver in extensive liver disease may predispose to accentuation of side effects. Although laboratory tests have not indicated that Talwin causes or increases renal or hepatic impairment, the drug should be administered with caution to patients with such impairment.

Myocardial Infarction. As with all drugs, Talwin should be used with caution in patients with myocardial infarction who have nausea or vomiting.

Biliary Surgery. Until further experience is gained with the effects

of Talwin on the sphincter of Oddi, the drug should be used with caution in patients about to undergo surgery of the biliary tract. **Patients Receiving Narcotics.** Talwin is a mild narcotic antagonist. Some patients previously receiving narcotics have experienced no withdrawal symptoms after receiving Talwin.

CNS Effect. Caution should be used when Talwin is administered to patients prone to seizures; seizures have occurred in a few patients in association with the use of Talwin although no cause-effect relationship has been established.

Adverse Reactions: Reactions reported after oral administration of Talwin include *gastrointestinal:* nausea, vomiting; infrequent constipation; and rarely abdominal distress, anorexia, diarrhea. *CNS effects:* dizziness, lightheadedness, sedation, euphoria, headache; infrequently weakness, disturbed dreams, insomnia, syncope; visual blurring and focusing difficulty, hallucinations (see *Acute CNS Manifestations* under WARNINGS); and rarely tremor, instability, excitement, tinnitus. *Autonomic:* sweating; infrequent flushing; and rarely chills. *Allergic:* infrequently rash; and rarely urticaria, edema of the face. *Cardiovascular:* infrequently decrease in blood pressure, tachycardia. *Other:* rarely respiratory depression, urinary retention.

Dosage and Administration: *Adults.* The usual initial adult dose is 1 tablet (50 mg.) every three or four hours. This may be increased to 2 tablets (100 mg.) when needed. Total daily dosage should not exceed 600 mg.

When antiinflammatory or antipyretic effects are desired in addition to analgesia, aspirin can be administered concomitantly with Talwin.

Children Under 12 Years of Age. Since clinical experience in children under 12 years of age is limited, administration of Talwin in this age group is not recommended.

Duration of Therapy. Patients with chronic pain who have received Talwin orally for prolonged periods have not experienced withdrawal symptoms even when administration was abruptly discontinued (see WARNINGS). No tolerance to the analgesic effect has been observed. Laboratory tests of blood and urine and of liver and kidney function have revealed no significant abnormalities after prolonged administration of Talwin.

Overdosage: Manifestations. Clinical experience with Talwin overdosage has been insufficient to define the signs of this condition.

Treatment. Oxygen, intravenous fluids, vasopressors, and other supportive measures should be employed as indicated. Assisted controlled ventilation should also be considered. Although naphine and levallorphan are not effective antidotes for respiratory depression due to overdosage or unusual sensitivity to Talwin, parenteral naloxone (Narcan®, available through Endo Laboratories) is a specific and effective antagonist. If naloxone is not available, parenteral administration of the analeptic, methylphenidate (Ritalin®) may be of value if respiratory depression occurs.

Talwin is not subject to narcotic controls.

How Supplied: Tablets, peach color, scored. Each tablet contains Talwin (brand of pentazocine) as hydrochloride equivalent to 50 mg. base. Bottles of 100.

Winthrop Winthrop Laboratories, New York, N. Y. 10016 (158)

50 mg. Tablets

Talwin®
brand of
pentazocine (as hydrochloride)

the long-range analgesic

President's Page

Peer Review

It has recently come to my attention that in several instances decisions by District Peer Review Committees in reference to complaints from third party members and from patients have been ignored. In one case a physician has instigated suit in court for the collection of the amount of his charges deemed excessive by his District Peer Review Committee. In another case a physician simply refuses to meet with his District Peer Review Committee.

Fortunately, the majority of physicians accept the concept and principles involved in Peer Review, both in respect to utilization and to fiscal payment. I ask those physicians who are not cooperating with Peer Review to consider the alternatives all physicians may be faced with if we do not operate Peer Review properly.

Those physicians who are not cooperating with Peer Review are not cooperating with organized medicine. Perhaps they may believe that organized medicine does not represent them. I hasten to ask them if they are naive enough to believe that the freedom they now enjoy in their practice would be what it is today if it were not for the efforts of organized medicine?

I admire independence, but independence to the point of not cooperating with one's peers is foolish indeed. To do so violates medical ethics. When the public loses faith in the ethical commitments of a profession and begins to substitute external control, it then takes the first step toward converting that profession into a trade.

Consider the implications of pending federal legislation. It is the concensus of opinion



DR. PHILLIPPI

that Amendment No. 823 to HR. 1 (or the Bennett Amendment) will pass the United States Senate. This will establish PSRO's (Professional Standards Review Organizations).

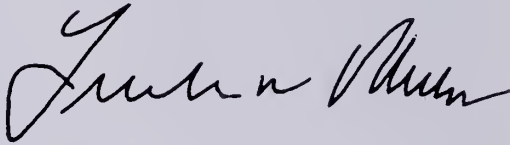
This review of both fiscal payment and of quality care in regard to physicians will not be performed solely by our peers, but by consumers or lay personnel who would have equal representation. These organizations would assume jurisdiction over all programs funded by the Social Security Act.

Their jurisdiction would also extend to all federally-endowed institutions or Hill-Burton Hospitals and therefore would involve all patient care. They would control elective admissions. They would review profiles of practitioners and determine whether the care or services rendered met certain criteria. They would establish regional norms of care. They would also serve in fiscal control and would set up fee-for-service guidelines.

Your State Association will attempt the formation of a statewide corporation to comply with the Bennett Amendment. This cor-

poration would have only one class of membership: any physician duly licensed to practice medicine in the State of Alabama.

In my opinion Peer Review is good. We should operate it properly even if we were not threatened by government, just as we should operate continuing medical education. If we do not operate Peer Review properly, the alternatives are clearly in sight.



Frank M. Phillippi, Jr., M. D.

The same organization that has put men on the moon has entered the field of respiratory medicine with a compact, fully automatic mobile medical gas analyzer that uses technology first developed under contract with the National Aeronautics and Space Administration.

The little machine measures the composition of air breathed in and exhaled from the lungs as an aid in monitoring pulmonary and cardiovascular activity in patients. Oxygen, carbon dioxide, nitrogen and additional selected gases are measured by the device simultaneously and on a breath-to-breath basis.

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...Still an
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WAMASA Editor, Mrs. William L. Smith

Are You Guilty?

Are you guilty of neglecting your legislative responsibility? The answer, I fear, is yes for the majority of us. In the democratic process, the political power vested in each citizen, not only represents an opportunity for involvement, but also carries a responsibility to become involved.

Alexis de Tocqueville warned us of "A most dangerous passage in the history of a democratic people . . . (a time when) they lose sight of the close connection that exists between the private fortune of each, and the prosperity of all. It is not necessary to do violence to such people to strip them of the rights they enjoy: they themselves willingly loosen their hold. The discharge of political duties appears to be a troublesome impediment which diverts them from their occupations; to look after what they call their own business. They neglect their chief business which is to remain their masters."

For years the medical profession was a beautiful example of the above description. However, this has not been true in most recent years. Physicians and their wives have become more knowledgeable and more outspoken in areas relating to medical legislation. This has come from necessity. Who else but the medical doctor can tell and show legislators that medical legislation cannot be pie-in-the-sky promises, but must be the kind that can be delivered, using the resources available in numbers of physicians and facilities. There is still a lot of work to be done in this area.

There are some other things we should be doing at home so that we are not accused of having our own selfish motives behind our actions. We need to be involved in

AUXILIARY PLEDGE

"I pledge my loyalty and devotion to the Woman's Auxiliary to the American Medical Association. I will support its activities, protect its reputation and ever sustain its high ideals."



MRS. HANSBERRY

politics at the local level. Get involved in non-medical issues. This participation can be rewarding, and the people and the legislators can see that we are really interested in good legislation which effects more than just the medical community. This can encourage them to have an open mind when we give them our side of a medical issue. A little time and money go a long way in getting the attention of a legislator. So—come on Doctors, supply a little legislative money and we will give the time. Make a good investment today.

A. Rae Hansberry

A. Rae Hansberry
President



Smile Or Be Sued

Too often some physicians tend to forget that patients are people. They treat patients as if they were malfunctioning machines who need either repairs or new parts but who do not need warmth, courtesy or attention paid to their questions. Richard M. Markus, president of the American Trial Lawyers Association, has stated that he feels that if MDs were more sensitive to their patients' needs as human beings, three fourths of all professional liability suits could be avoided. Some MDs seem to feel that answering questions and quieting fears is not their cup of tea.

Senator William B. Saxbe (R. Ohio), the father of a physician, told a panel on professional liability insurance at a meeting of the American Association of Neurological Surgeons in Houston, Texas, that there used to be a time when a person would no more think of suing his physician than he would consider suing a dear friend. Taciturn and unsympathetic MDs are a minority to be sure, but a minority to be reckoned with seriously. One area wherein these physicians are doing harm disproportionate to their numbers can be found in the justified alarm over the soaring costs of medical professional liability insurance. Aetna Life and Casualty Company has said that the number of claims has increased 43 percent in the past five years.

The individual in the United States cannot help but be bewildered by the suddenness of his loss of social identity, especially when he is a patient in a hospital. He is a number to his bank, his government and his insurance company. He is surrounded by zip

codes and computer cards and recorded messages. Instead of adding to his patient's growing feeling of anonymity, the physician could halt some of the inevitable accompanying frustration by taking more time with his patients.

Mr. Markus told the panel on professional liability insurance in Houston that his clients who are about to file professional liability suits grumble most often about their treatment as *people* by physicians and their secretaries and receptionists. The MD's attitude filters down through the people who work for him. If he is rude, they will be rude; if he is short with his patients, his secretary will probably take her cue from him.

Time to Listen

It is true that a general shortage of MDs which results in heavy work loads for most physicians, adds to this problem. MDs simply do not have the time to listen to all their patients' troubles. But they can take a few minutes to be courteous and to maintain some vestige of their waning rapport. Also, the fact that more people live mobile lives has certainly added to the impermanence of all relationships. A physician cannot be expected to build any deep understanding for a patient when he sees him a few times and then the patient moves to another area. This transitory quality, however, makes it even more important that the MD build a satisfactory substitute relationship with his patient. Such an affinity may be fleeting, but it is no less important and impressionable.

If close and friendly communication be-

tween MDs and their patients can prevent professional liability suits, this rapport will help the patient and protect the physician.

Caring, after all, is a large part of curing, and that is what medicine is all about.

Reprinted from the Mass. Physician, June, 1972.

Acupuncture Without The Moonlight And Roses

Two recent *New York Times* dispatches described the use of acupuncture in surgery in the New York area. The news item had reference to the case of one William Rosner to whose foot a skin graft was applied to on May 26 at the Albert Einstein Medical Center. Rosner stated: "It was just a tingling sensation when they cut the skin." The administering team included Doctor Louis Orkin, chairman of the department of anesthesia; Doctor Franz Z. Warren, anesthesiologist and psychiatrist; and Doctor Pang L. Man and Yoshiaki Omura; specialties not stated. This was indeed an ethnic *mélange*.

Warren had earlier demonstrated before the New York State Society of Anesthesiology relief of "arm trouble" in a young lady by insertion of a needle into the shoulder. *The Times* reported: "After it was removed, she raised her arm, pain-free, she said."

Finally, Doctor John Fox, an anesthesiologist at the Downstate Medical Center, removed a papilloma from the tonsil of a medical student named Frederic Newman, using four needles, one in each hand and foot. The procedure, Newman stated had been painless, while a similar procedure earlier had caused "excruciating pain."

The interest of *The New York Times* in this type of anesthesia is obviously related to the experience of its vice president, James Reston, who had been subjected to an appendectomy performed on him under acupuncture in Peking just prior to President Nixon's visit to China.

Doctor Samuel Rosen, the distinguished otolaryngologist of New York and originator of stapedectomy, has described his observa-

tions of the procedure during an invitation visit to China.

All of this adds up to something, but it is not quite clear just what. As pointed out by *The Times*, Chinese doctors have treated ailments with acupuncture needles for centuries. It is only during the last year or two, however, that they have explored their use for surgical anesthesia. It has been reported that small electrical currents are passed through the needles in some cases.

We are troubled by all this. There is somehow a faint aroma of snake oil or Kickapoo water.

If this method (or these methods) have validity, it should be possible for rational men to observe and acquire the techniques. They should be reproducible by intelligent observers under controlled conditions, and they should be reported systematically in professional journals. Whether the media are psychomatic or physiological is not relevant. But it should be entirely feasible to study and learn the physiological, psychological, or neurological mechanisms involved.

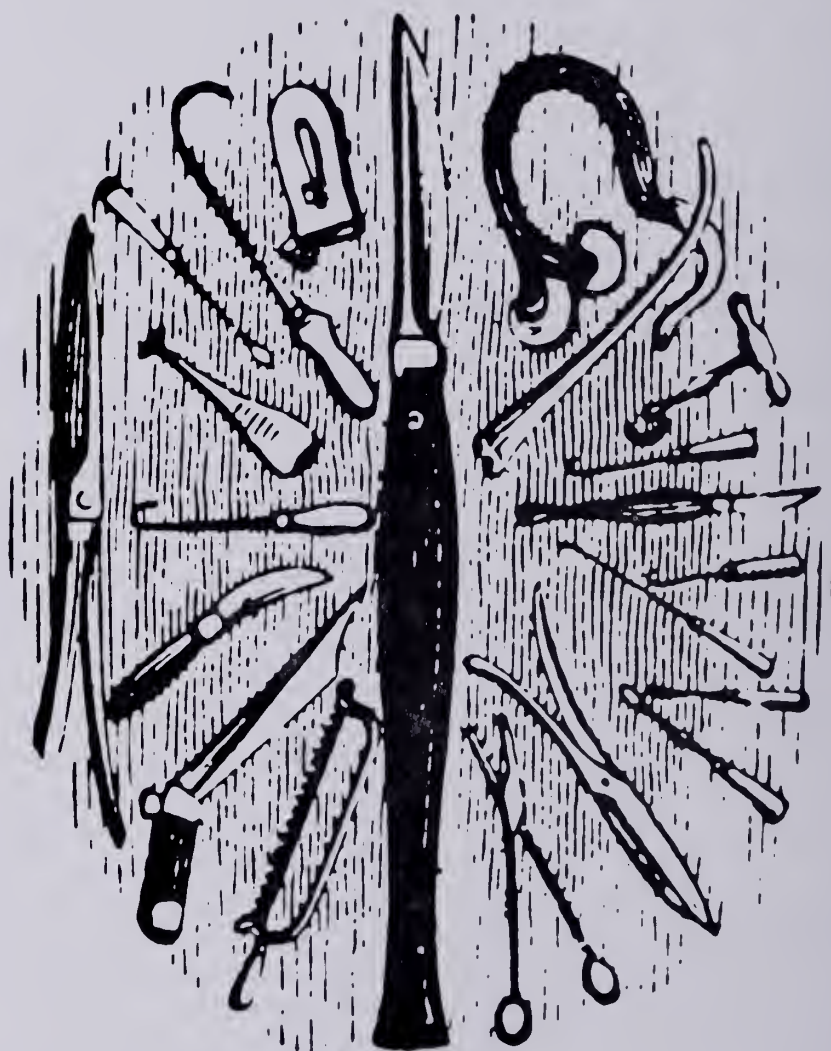
While Doctor John Collins Warren could say after a demonstration of ether at the Massachusetts General Hospital "Gentlemen, this is no humbug," the fact remains that thereafter the phenomenon was reproduced innumerable times by ordinary mortals. We now anticipate hopefully some reasonably objective demonstrations and some scientific descriptions of the procedures, efficacy, and mechanisms of acupuncture anesthesia. Until this is done properly, there will remain little more than moonlight and roses.

Reprinted from the Rhode Island Medical Journal, July, 1972.

(Continued on Page 157)

In 1852 it was reported that practicing medicine in the southern section of Alabama were "40 regular practitioners, 2 hemeopathists and hydropathists, 3 root doctors and Thompsonians, 3 general quackery and one idio-electopathist."

BLUE CROSS-BLUE SHIELD OF ALABAMA



(Continued from Page 155)

WOULD YOU?

Would you like to join a medical organization, one based on a free and absolutely representative government? One that is open to any competent and ethical physician? That is available in every state and nearly every country? That is concerned as much as its members permit in policing the ethics of medicine?

Would you?

Would you like to belong to a professional organization that is involved in attempting to bring solutions to every problem in the medical area of society, having first made sure it is a problem? An organization that gives you a floor for your opinions and representation in the development of policy from the country up to and through the states to the nation? One that studies hard and works hard to represent all segments of medicine? And still has to see to the problems and solutions of all of the people outside of medicine? And recognizes that it must do what individuals and small groups cannot do?

Would you?

Would you believe that other doctors care—and really care enough about you and your opinions and your problems and your proposals to carry the ball all of the way to the national newspapers, television, and even the floor of the national legislative halls? Because you don't have the time or don't take the time or just don't care?

Would you?

Do you want to belong to a professional organization that sets the standards of professional care and that now establishes the means to audit and assure the standards of medical care delivered to the American people? All of the American people? An organization that establishes and approves standards of education for MD degrees, standards for surgeons, internists, orthopedists, and family practitioners and still protects the rights of all?

Do you?

Would you like to join a medical organization to whom the President, senators, members of Congress, governors, mayors, Jane Smith and Jimmy Jones and the editors of all newspapers come for advice and help on medical matters from a stumped toe to insurance and medical care for all people?

Would you?

Would you like to be part of a 124-year-old scientific organization that has been the greatest single impetus to scientific progress in medicine since its inception? And which today is more active in helping to discover the answers for the scientific problems of medicine and of getting it to doctors than all other organizations in the world?

Would you?

If you have never joined you have a stake like the rest of us. Just pay the pittance of dues, roll up your sleeves, and jump into the work. You, too, can be involved in the development of the next 30 years—the greatest years, potentially, in the history of this beautiful planet we have tried to destroy. And medicine will offer the greatest drama of all, and some of the most important and magnificent drama in all of human endeavor. And the AMA is the most important organization in the relation of medicine to society, government, business, and all other facets of human endeavor. And the state and county societies must provide the base from which it operates and from which ideas come. We all have a stake in a great future. Where we will go we do not know. But we dare not “sulk in our tents.” We must be a part of all that happens. Our strength is the greatest medical organization in the world and in the doctors that have the courage and strength and compassion to make it great for all people.

(John H. Saffold, M. D., immediate past president of the Tennessee Medical Association, in the TMA Journal, December, 1971.)



around the state

Vital Statistics

MEMBERS DECEASED

Jefferson County

Ray, Emmette Colquitt, Birmingham, Alabama, Deceased 7/1/72.

Lee County

Thoroughman, James Chanslor, Opelika, Alabama, Deceased 7/13/72.

CHANGES OF ADDRESS

Coffee County

Sanders, Horace E., present Enterprise to Medical Center, George Wallace Dr., Enterprise, Alabama 36330.

Jefferson County

Bean, Stuart K., present Birmingham to 1500 6th Ave. South, Box 3387-A, Birmingham, Alabama 35205.

Bush, Stephen T., present Birmingham to 400 Palliser Street, Johnstown, Pennsylvania 15905.

Gay, Madison W., present Birmingham to Stuart Town Apartments 10-B, Beaufort, South Carolina 29902.

Kennedy, Hughes, III, present Birmingham to 2930 North 16th Street, Box 2727, Birmingham, Alabama 35202.

Lewis, Roger K., present Birmingham to 300 Auburn Drive, Daytona Beach, Florida 32018.

Miller, James A., present Birmingham to 724 3rd Ave. West, Apt. 3-C, Birmingham, Alabama 35208.

Robinson, E. Bryce, Jr., present Fairfield to 3526 Lennox Road, Birmingham, Alabama 35213.

Ryan, Robert T., Jr., present Birmingham to 1717 South 11th Avenue, Birmingham, Alabama 35205.

Ward, John L., present Columbia, South Carolina to 2518 Canterbury Road, Columbia, South Carolina 29204.

Lamar County

Box, William C., present Sulligent to Carraway Methodist Hospital, 2506-16th Avenue North, Birmingham, Alabama 35234.

Lauderdale County

Dunn, Milton C., present Florence to 215 West Reeder Street, Florence, Alabama 35630.

Mobile County

Martin, Philip D., present Prichard to 3151 Dauphin, Mobile, Alabama 36606.

Savage, Charles H. Jr., present Prichard to 3167 Dauphin Street, Mobile, Alabama 36606.

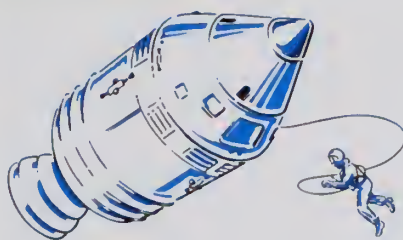
Monroe County

Martens, Carl W., present Monroeville to 604 Medical Center Drive, Monroeville, Alabama 36460.

Simmons, A Grayson, present Monroeville to 604 Medical Center Drive, Monroeville, Alabama 36460.

Smith, Rayford A., Jr. present Monroeville

(Continued on Page 163)



Man in space, now fait accompli, re-emphasizes the importance of Uro-Phosphate therapy. Research into the effect of space travel on the astronaut reveals that weightlessness causes loss of bone calcium. As the bones are required to bear less and less of the weight of the body they lose calcium, increasing the calcium content of the urine. When physical activity is reduced, the acidity of the urine should be adjusted to keep increased calcium in solution . . . a prophylaxis to prevent kidney or bladder calculi.

Uro-Phosphate®

NOW A SUGAR-COATED TABLET

Each tablet contains: METHENAMINE, 300 mg.; SODIUM ACID PHOSPHATE, 500 mg.

Uro-Phosphate gives comfort and protection when inactivity causes discomfort in the urinary function. It keeps calcium in solution, preventing calculi; it maintains clear, acid, sterile urine; it encourages

complete voiding and lessens frequency when residual urine is present.

Uro-Phosphate contains sodium acid phosphate, a natural urinary acidifier. This component is fortified with methenamine which is inert until it reaches the acid urinary bladder. In this environment it releases a mild antiseptic keeping the urine sterile.

Uro-Phosphate is safe for continuous use. There are no contra-indications other than acidosis. It can be given in sufficient amount to keep the urine clear, acid and sterile. A heavy sugar coating protects its potency.

Dosage:

For protection of the inactive patient 1 or 2 tablets every 4 to 6 hours is usually sufficient to keep the urine clear, acid and sterile.

2 tablets on retiring will keep residual urine acid and sterile, contributing to comfort and rest.

A clinical supply will be sent to physicians and hospitals on request.



WILLIAM P. POYTHRESS & COMPANY, INC., RICHMOND, VIRGINIA 23217

Manufacturers of Ethical Pharmaceuticals



When you select this familiar antibiotic for IV infusion you have available a broad dosage range that hospitalized patients may need.

Intravenous Lincocin (lincomycin hydrochloride, Upjohn), with its 1.2 to 8 grams/day dosage range, covers many serious and even life-threatening infections. Lincocin is effective in infections due to susceptible strains of streptococci, pneumococci, and staphylococci. Lincocin IV therefore can be as useful in your hospitalized patients as its IM use has proved to be in your office patients. As with all antibiotics, *in vitro* susceptibility studies should be performed.

1.2 to 8 grams/day IV dosage range:

Most hospitalized patients with uncomplicated pneumonias respond satisfactorily to 1.2 to 1.8 grams/day of Lincocin IV. These doses may have to be increased for more serious infections.

In life-threatening situations as much as 8 grams/day has been administered intravenously to adults.

In usual IV doses, Lincocin (lincomycin hydrochloride, Upjohn) should be diluted in 250 ml or more of normal saline solution or 5% glucose in water. But when 4 grams or more per day is given, Lincocin should be diluted in not less than 500 ml of either solution, and the rate of administration should not exceed 100 ml/hour. Too rapid intravenous administration of doses exceeding 4 grams may result in hypotension or, in rare instances, cardiopulmonary arrest.

Effective gram-positive antibiotic:

Lincocin IV is effective in respiratory tract, skin and soft-tissue, and bone



Infections caused by susceptible strains of pneumococci, streptococci, and staphylococci, including penicillin-resistant strains. Staphylococcal strains resistant to Lincocin (lincomycin hydrochloride, Upjohn) have been recovered. Before initiating therapy, culture and susceptibility studies should be performed. Lincocin has proved valuable in treating patients hypersensitive to penicillin or cephalosporins, since Lincocin does not share antigenicity with these compounds. However, hypersensitivity reactions have been reported, some of these in patients known to be sensitive to penicillin.

Well tolerated at infusion site: Lincocin intravenous infusions have not produced local irritation or phlebitis, when given as recommended. Lincocin is usually well tolerated in patients who are hypersensitive to other drugs. Nevertheless, Lincocin should be used cautiously in patients with asthma or significant allergies.

In patients with impaired renal function, the recommended dose of Lincocin should be reduced to 25–30% of the dose for patients with normal kidney function. Its safety in pregnant patients and in infants less than one month of age has not been established.

Lincocin may be used with other antimicrobial agents: Since Lincocin is stable over a wide pH range, it is suitable for incorporation in intravenous infusions; it also may be

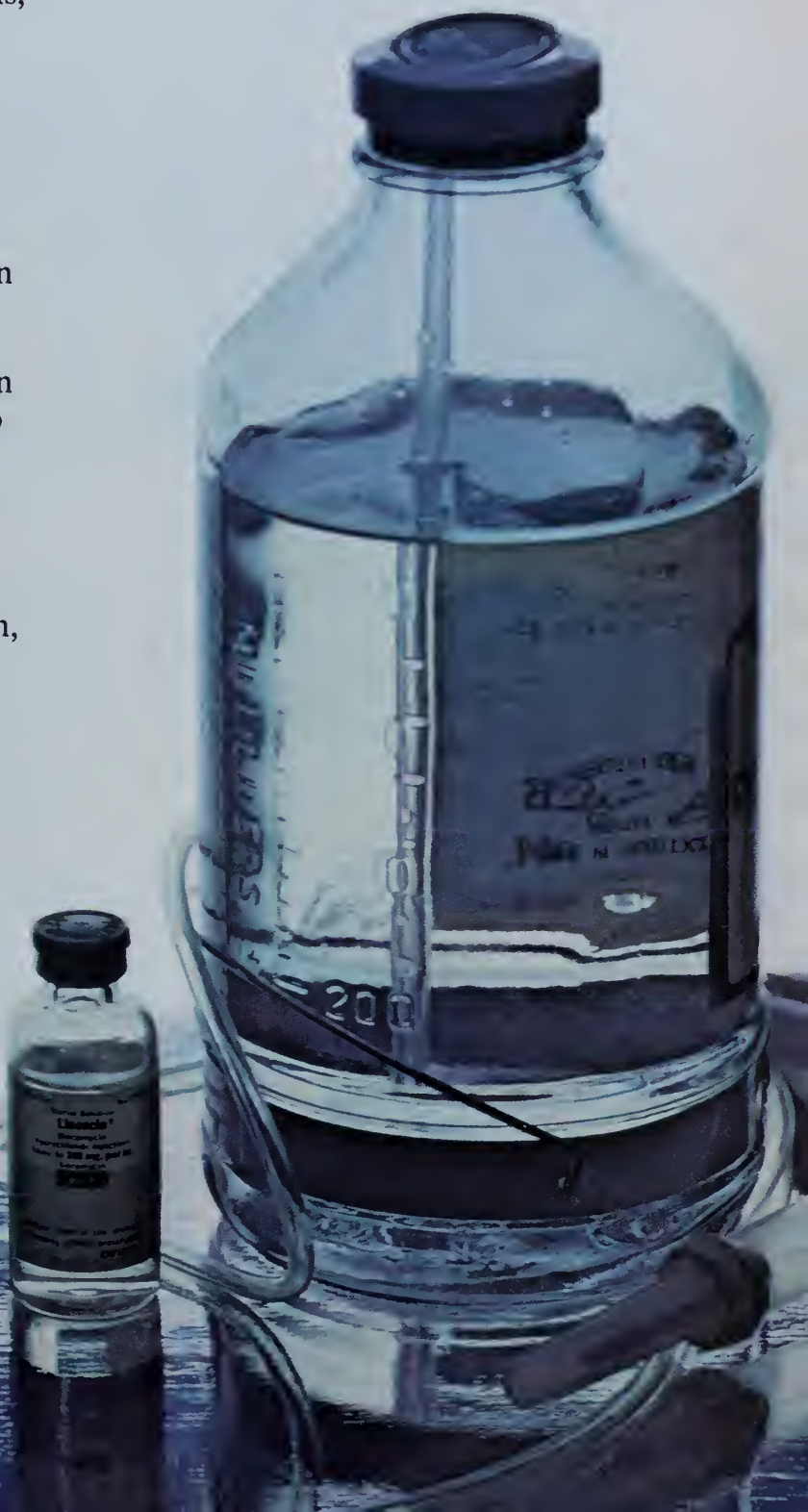
administered concomitantly with other antimicrobial agents when indicated. However, Lincocin should not be used with erythromycin, as *in vitro* antagonism has been reported.

Lincocin®

Sterile Solution (300 mg per ml)

(lincomycin hydrochloride, Upjohn)

For further prescribing information, please see following page.





Sterile Solution (300 mg. per ml.)

Lincocin[®]

(lincomycin hydrochloride, Upjohn)

Up to 8 grams per day by IV infusion for
hospitalized patients with life-threatening infections.

Lincocin is effective in infections due to
susceptible strains of streptococci, pneumococci,
and staphylococci. As with all antibiotics,
in vitro susceptibility studies should be performed.

Each
preparation
contains:

Lincomycin
hydrochloride
monohydrate
equivalent to
lincomycin base

250 mg Pediatric Capsule 250 mg
500 mg Capsule 500 mg
*Sterile Solution per 1 ml 300 mg
Syrup per 5 ml 250 mg

*Contains also: Benzyl Alcohol 9 mg; and,
Water for Injection—q.s.

Lincocin (lincomycin hydrochloride) is indicated in infections due to susceptible strains of staphylococci, pneumococci, and streptococci. *In vitro* susceptibility studies should be performed. Cross resistance has not been demonstrated with penicillin, ampicillin, cephalosporins, chloramphenicol or the tetracyclines. Some cross resistance with erythromycin has been reported. Studies indicate that Lincocin does not share antigenicity with penicillin compounds.

CONTRAINDICATIONS: History of prior hypersensitivity to lincomycin or clindamycin. Not indicated in the treatment of viral or minor bacterial infections.

WARNINGS: CASES OF SEVERE AND PERSISTENT DIARRHEA HAVE BEEN REPORTED AND HAVE AT TIMES NECESSITATED DISCONTINUANCE OF THE DRUG. THIS DIARRHEA HAS BEEN OCCASIONALLY ASSOCIATED WITH BLOOD AND MUCUS IN THE STOOLS AND HAS AT TIMES RESULTED IN AN ACUTE COLITIS. THIS SIDE EFFECT USUALLY HAS BEEN ASSOCIATED WITH THE ORAL DOSAGE FORM BUT OCCASIONALLY HAS

BEEN REPORTED FOLLOWING PARENTERAL THERAPY. A careful inquiry should be made concerning previous sensitivities to drugs or other allergens. Safety for use in pregnancy has not been established and Lincocin (lincomycin hydrochloride) is not indicated in the newborn. Reduce dose 25 to 30% in patients with severe impairment of renal function.

PRECAUTIONS: Like any drug, Lincocin should be used with caution in patients having a history of asthma or significant allergies. Overgrowth of nonsusceptible organisms, particularly yeasts, may occur and require appropriate measures. Patients with pre-existing monilial infections requiring Lincocin therapy should be given concomitant antimonilial treatment. During prolonged Lincocin therapy, periodic liver function studies and blood counts should be performed. Not recommended (inadequate data) in patients with pre-existing liver disease unless special clinical circumstances indicate. Continue treatment of β -hemolytic streptococci infections for 10 days to diminish likelihood of rheumatic fever or glomerulonephritis.

ADVERSE REACTIONS: *Gastrointestinal*—Glossitis, stomatitis, nausea, vomiting. Persistent diarrhea, enterocolitis, and pruritus ani. *Hemopoietic*—Neutropenia, leukopenia, agranulocytosis, and thrombocytopenic purpura have been reported. *Hypersensitivity reactions*—Hypersensitivity reactions such as angioneurotic edema, serum sickness, and anaphylaxis have been reported, sometimes in patients sensitive to penicillin. If allergic reaction occurs, discontinue drug. Have epinephrine, corticosteroids, and antihista-

mines available for emergency treatment. *Skin and mucous membranes*—Skin rash, urticaria, vaginitis, and rare instances of exfoliative and vesiculobullous dermatitis have been reported. *Liver*—Although no direct relationship to liver dysfunction is established, jaundice and abnormal liver function tests (particularly serum transaminase) have been observed in a few instances. *Cardiovascular*—Instances of hypotension following parenteral administration have been reported, particularly after too rapid IV administration. Rare instances of cardiopulmonary arrest have been reported after too rapid administration. If 4.0 grams or more administered IV, dilute in 500 ml of fluid and administer no faster than 100 ml per hour. *Special senses*—Tinnitus and vertigo have been reported occasionally. *Local reactions*—Excellent local tolerance demonstrated intramuscularly administered Lincocin (lincomycin hydrochloride). Reports of pain following injection have been infrequent. Intravenous administration of Lincocin 250 to 500 ml of 5% glucose in distilled water or normal saline has produced local irritation or phlebitis.

HOW SUPPLIED: 250 mg and 500 mg Capsules—bottles of 24 and 100. Sterile Solution, 300 mg per ml—2 and 10 ml vials and 2 ml syringe. Syrup, 250 mg per 5 ml—60 ml and pint bottles.

For additional product information, consult the package insert or see your Upjohn representative.

MEF B-6-S (KZL-7) JA71-16

The Upjohn Company
Kalamazoo, Michigan 49001

Upjohn

AROUND THE STATE

(Continued from Page 158)
to 604 Medical Center, Drive, Monroeville,
Alabama 36460.

NEW TELEPHONE NUMBERS

Hicks, J. J., Jefferson	933-7431
Hicks, J. N., Jefferson	933-7431
Kimbrough, J. E., Clarke	275-3571

Sanders, H. E., Coffee	347-3435
Sheehan, L. C., Jr., Montgomery	281-1590

CHANGE OF SPECIALTY

Talladega County

Rea, Robert C., 308 West Hickory Street,
Sylacauga, Alabama 35150. Ind. GP.

New Physicians Licensed to Practice in Alabama



Phillip Edward
Andrews, M. D.,
Ft. Rucker



William Jerold Baggs,
M. D.,
Anniston



Herbert Lee Bowling,
Jr., M. D.,
Mobile



Walter Martin
Braunohler, M. D.,
Ft. Rucker



Alan Yale Cohen,
M. D.,
Ft. McClellan



Francis Michael
Connery, M. D.,
Birmingham



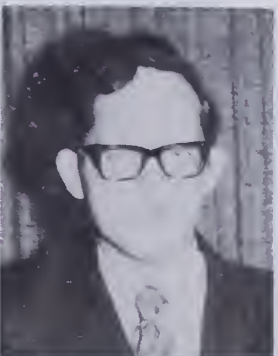
Ronald Emile Ersay,
M. D.,
Ft. McClellan



William Thurn Esham,
M. D.,
Theodore



Stephen G. Gelfand,
M. D.,
Redstone Arsenal



Charles Curtis Gipson,
M. D.,
Mobile



James Russell Gleaves,
M. D.,
Fairfield



Gary Clifford Graham,
M. D.,
Foley

(Continued on Page 169)

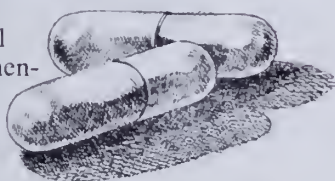
**Because you
practice
medicine in the
Cotton State...**



You carry one of the heaviest patient loads in the country. Since this may include a number of patients with gastritis and duodenitis... you should know more about Librax®

Helps reduce anxiety-related G.I. symptoms

A patient may blame his attacks of gastritis or duodenitis on "something he ate" but contributing factors may be his job, marital problems, financial worries or some other unmentioned source of stress and excessive anxiety that exacerbated the condition. Whether it is "something he ate" or "something eating him," adjunctive Librax can help. Librax offers both the antianxiety action of Librium® (chlordiazepoxide HCl), that can help relieve excessive anxiety, and the dependable anticholinergic action of Quarzan® (clidinium Br), that can help reduce gastrointestinal hypermotility and hypersecretion.



Patient-oriented dosage — up to 8 capsules daily in divided doses

For optimal response, dosage can be adjusted to suit patient needs—1 or 2 capsules, 3 or 4 times a day.

To help relieve anxiety-linked symptoms in gastritis and duodenitis adjunctive Librax®



Each capsule contains 5 mg chlordiazepoxide HCl and 2.5 mg clidinium Br.

Before prescribing, please consult complete product information, summary of which follows:

Contraindications: Patients with glaucoma; prostatic hypertrophy and benign bladder neck obstruction; known hypersensitivity to chlordiazepoxide hydrochloride and/or clidinium bromide.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering Librium (chlordiazepoxide hydrochloride) to known addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards. As with all anticholinergic drugs, an inhibiting effect on lactation may occur.

Precautions: In elderly and debilitated, limit dosage to smallest effective amount to preclude development of ataxia, oversedation or confusion (not more than two capsules per day initially; increase gradually as needed and tolerated). Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients. Employ usual precautions

in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: No side effects or manifestations not seen with either compound alone have been reported with Librax. When chlordiazepoxide hydrochloride is used alone, drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally with chlordiazepoxide hydrochloride, making periodic blood counts and liver function tests advisable during protracted therapy. Adverse effects reported with Librax are typical of anticholinergic agents, i.e., dryness of mouth, blurring of vision, urinary hesitancy and constipation. Constipation has occurred most often when Librax therapy is combined with other spasmolytics and/or low residue diets.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

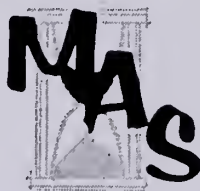
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Consultation regarding Medical Accounts is available in your area. Evaluation of your need is available. A knowledgeable medical collection agency proceeds with discretion and tact in keeping with the dignity of the medical community.

Medical Account Service is presently providing services to over a hundred doctors and hospitals in the Southeast and can assure you of many "paid in full" results.

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Pre-Sate®

(chlorphentermine HCl)

CAUTION: Federal law prohibits dispensing without prescription.

Indications: Pre-Sate (chlorphentermine hydrochloride) is indicated in exogenous obesity, as a short term (i.e., several weeks) adjunct in a regimen of weight reduction based upon caloric restriction.

Contraindications: Glaucoma, hyperthyroidism, pheochromocytoma, hypersensitivity to sympathomimetic amines, and agitated states. Pre-Sate (chlorphentermine hydrochloride) is also contraindicated in patients with a history of drug abuse or symptomatic cardiovascular disease of the following types: advanced arteriosclerosis, severe coronary artery disease, moderate to severe hypertension, or cardiac conduction abnormalities with danger of arrhythmias. The drug is also contraindicated during or within 14 days following administration of monoamine oxidase inhibitors, since hypertensive crises may result.

Warnings: When weight loss is unsatisfactory the recommended dosage should not be increased in an attempt to obtain increased anorexigenic effect; discontinue the drug. Tolerance to the anorectic effect may develop. Drowsiness or stimulation may occur and may impair ability to engage in potentially hazardous activities such as operating machinery, driving a motor vehicle, or performing tasks requiring precision work or critical judgment. Therefore, such patients should be cautioned accordingly. Caution must be exercised if Pre-Sate (chlorphentermine hydrochloride) is used concomitantly with other central nervous system stimulants. There have been reports of pulmonary hypertension in patients who received related drugs.

Drug Dependence: Drugs of this type have a potential for abuse. Patients have been known to increase the intake of drugs of this type to many times the dosages recommended. In long-term controlled studies with high dosages of Pre-Sate, abrupt cessation did not result in symptoms of withdrawal.

Usage in Pregnancy: The safety of Pre-Sate (chlorphentermine hydrochloride) in human pregnancy has not yet been clearly established. The use of anorectic agents by women who are or who may become pregnant, and especially those in the first trimester of pregnancy, requires that the potential benefit be weighed against the possible hazard to mother and child. Use of the drug during lactation is not recommended. Mammalian reproductive and teratogenic studies with high multiples of the human dose have been negative.

Usage in Children: Not recommended for use in children under 12 years of age.

Precautions: In patients with diabetes mellitus there may be alteration of insulin requirements due to dietary restrictions and weight loss. Pre-Sate (chlorphentermine hydrochloride) should be used with caution when obesity complicates the management of patients with mild to moderate cardiovascular disease or diabetes mellitus, and only when dietary restriction alone has been unsuccessful in achieving desired weight reduction. In prescribing this drug for obese patients in whom it is undesirable to introduce CNS stimulation or pressor effect, the physician should be alert to the individual who may be overly sensitive to this drug. Psychologic disturbances have been reported in patients who concomitantly receive an anorectic agent and a restrictive dietary regimen.

Adverse Reactions: Central Nervous System: When CNS side effects occur, they are most often manifested as drowsiness or sedation or overstimulation and restlessness. Insomnia, dizziness, headache, euphoria, dysphoria, and tremor may also occur. Psychotic episodes, although rare, have been noted even at recommended doses. **Cardiovascular:** tachycardia, palpitation, elevation of blood pressure. **Gastrointestinal:** nausea and vomiting, diarrhea, unpleasant taste, constipation. **Endocrine:** changes in libido, impotence. **Autonomic:** dryness of mouth, sweating, mydriasis. **Allergic:** urticaria. **Genitourinary:** diuresis and, rarely, difficulty in initiating micturition. **Others:** Paresthesias, sural spasms.

Dosage and Administration: The recommended adult daily dose of Pre-Sate (chlorphentermine hydrochloride) is one tablet (equivalent to 65 mg chlorphentermine base) taken after the first meal of the day. Use in children under 12 not recommended.

Overdosage: Manifestations: Restlessness, confusion, assaultiveness, hallucinations, panic states, and hyperpyrexia may be manifestations of acute intoxication with anorectic agents. Fatigue and depression usually follow the central stimulation. Cardiovascular effects include arrhythmias, hypertension, or hypotension and circulatory collapse. Gastrointestinal symptoms include nausea, vomiting, diarrhea, and abdominal cramps. Fatal poisoning usually terminates in convulsions and coma.

Management: Management of acute intoxication with sympathomimetic amines is largely symptomatic and supportive and often includes sedation with a barbiturate. If hypertension is marked, the use of a nitrate or rapidly acting alpha-receptor blocking agent should be considered. Experience with hemodialysis or peritoneal dialysis is inadequate to permit recommendations in this regard.

How Supplied: Each Pre-Sate (chlorphentermine hydrochloride) tablet contains the equivalent of 65 mg chlorphentermine base; bottles of 100 and 1000 tablets.

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AROUND THE STATE

(Continued from Page 163)



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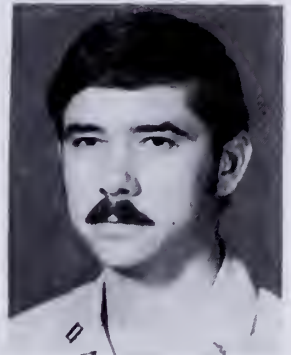
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Frank Charles Tucker,
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Mobile

Throw out opium, which the Creator himself seems to prescribe, for we often see the scarlet poppy growing in the cornfields, as if it were foreseen that wherever there is hunger to be fed there must also be pain to be soothed; throw out a few specifics which our art did not discover, and is hardly needed to apply; throw out wine, which is a food, and the vapors which produce the miracle of anesthesia, and I firmly believe that if the whole materia medica, as now used, could be sunk to the bottom of the sea, it would be all the better for mankind—and all the worse for the fishes.

O. W. Holmes:
Address to the Massachusetts
Medical Society, Boston, 1860.

Good medicine always has a bitter taste.

—Japanese proverb.

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Hobbies To Fill A Doctor's Leisure

No man is really happy or safe without a hobby, and it makes precious little difference what the outside interest may be—botany, beetles or butterflies, roses, tulips or irises; fishing, mountaineering or antiquities—anything will do so long as he straddles a hobby and rides it hard.

—Sir William Osler, 1909

Two Alabama Doctors Among Wine Connoisseurs

"Wine is a food," Dr. Oliver Wendell Holmes told the Massachusetts Medical Society in 1860. Further, as Louis Pasteur proclaimed a quarter of a century later, it "is the most healthful and most hygienic of beverages."

Some eighteen centuries before Dr. Holmes, however, the Holy Scriptures were prescribing: "Drink no longer water, but use a little wine for thy stomach's sake and thine own infirmities."

Probably the most exclusive, most aristocratic and most elegant statewide society in Alabama, now approaching its 12th birthday, is the Mobile Chapter of the International Wine and Food Society. And it now totals 12 members, nine active and three associate.

So it should be surprising to none that, in this select little circle of Alabama devotees to the fermented grape, there are two Mobile physicians, proudly confessing their hobby is oenology.

Now, there is a word to roll on your tongue and savor with your taste buds! It means having knowledge or making a study of wines. And as it comes out of the ancient Athenian culture, it proves that the Greeks had a word for that one too.

For those who wish to add the word to their vocabulary, it is pronounced: en-OL-ogy. The first "o" is silent as in Oedipus.



WINE IS THEIR HOBBY.—From left: Harvey E. Jones, chapter president; Julian F. McGowin, Dr. Selden H. Stephens, Jr., Albert E. Reynolds, secretary-treasurer; Nicholas S. McGowin, vice president; Dr. Kenneth M. Hannon, host for the most recent dinner; Howard Barney, and Norman A. Nicolson.

Bastille Day (which falls on July 14th) was the date of the 41st dinner meeting of the society since its organization in January, 1961. And significantly one of the two doctors who are active members of the Society was the host in his Mobile home. He is Kenneth M. Hannon, M. D., and he entertained at his Hillwood Road home in Spring Hill. The always printed menu on one page and the array of vintage wines on the other are reminiscent of a lavish age long dead. And in the wine list is an extravagantly costly magnum of "Chateau Lafite-Rothschild (Premier Cru Classe), 1959."

HOBBIES TO FILL A DOCTOR'S LEISURE

All but one of the active members attended, including the other doctor, Selden H. Stephens, Jr., M. D. Other actives present were Harvey E. Jones, chapter president; Nicholas S. McGowin, vice president; Albert E. Reynolds, secretary-treasurer; Julian F. McGowin, Howard Barney, and Norman A. Nicolson. The one active missing was Kenneth R. Giddens, who was in Asia, traveling for the Voice of America, of which he is now director.

The three associate members are Finley McRae, chairman emeritus of Mobile's Merchants National Bank; N. Floyd McGowin and Earl M. McGowin, both of Chapman, Alabama.

The organization, which is headquartered in London, meets approximately every 90 days, or four times a year.

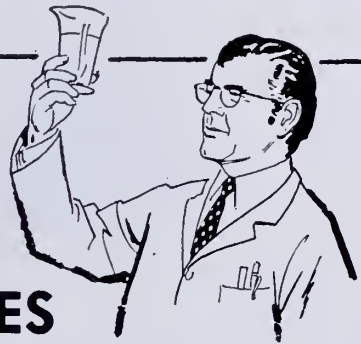
Host of the 41st meeting, Dr. Kenneth Moore Hannon, was born in Mobile 13 April 1926, received his baccalaureate degree from

Alabama in 1948, his M. D. from Alabama in 1952. Married to the former Sara Frances Thomas of Altoona, Ala., there are three children: Leslie Colvin, 18; William C. Hannon 2nd, 16; and Sally Elizabeth, 14. Dr. Hannon is an orthopedic surgeon.

The other doctor in this exclusive society is also a native Mobilian. Selden Harbour Stephens, Jr., was born 27 June 1929, and, the son of a doctor, he and his father were subjects of a "Fathers and Sons in Medicine" article published in the Journal in November, 1969. He earned his baccalaureate at VMI in 1949, his M. D. from Alabama in 1953. Married to the former Jane McKinnon of Troy, there are four children: Ann Brockman, 15; Selden H. III, 11; Thornton McKinnon, 10; and Cameron Mosteller, 8. Dr. Stephens' speciality is obstetrics and gynecology.

The official magazine of the International
(Continued on Page 174)

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Antiminth is partially absorbed after an oral dose. Plasma levels of unchanged drug are low. Peak levels (0.05-0.13 $\mu\text{g/ml}$) are reached in 1-3 hours. Quantities greater than 50% of administered drug are excreted in feces as the unchanged form, whereas only 7% or less of the dose is found in urine as the unchanged form of the drug and its metabolites.

Indications. For the treatment of ascariasis (roundworm infection) and enterobiasis (pinworm infection).

Warnings. Usage in Pregnancy: Reproduction studies have been performed in animals and there was no evidence of propensity for harm to the fetus. The relevance to the human is not known.

There is no experience in pregnant women who have received this drug.

Precautions. Minor transient elevations of SGOT have occurred in a small percentage of patients. Therefore, this drug should be used with caution in patients with pre-existing liver dysfunction.

Adverse Reactions. The most frequently encountered adverse reactions are related to the gastrointestinal system.

Gastrointestinal and hepatic reactions: anorexia, nausea, vomiting, gastralgia, abdominal cramps, diarrhea and tenesmus, transient elevation of SGOT.

CNS reactions: headache, dizziness, drowsiness, and insomnia.

Skin reactions: rashes.

Dosage and Administration. Children and Adults: Antiminth Oral Suspension (50 mg. of pyrantel base/ml.) should be administered in a single dose of 11 mg. of pyrantel base per kg. of body weight (or 5 mg./lb.); maximum total dose 1 gram. This corresponds to a simplified dosage regimen of 1 cc. of Antiminth per 10 lbs. of body weight. (One teaspoonful = 5 cc.)

Antiminth (pyrantel pamoate) Oral Suspension may be administered without regard to ingestion of food or time of day; and purging is not necessary prior to, during, or after therapy. It may be taken with milk or fruit juices. Because of limited data on repeated doses, no recommendations can be made.

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(Continued from Page 171)

Wine and Food Society, published in London, carries accounts of chapter meetings from all over the world. Chapter accounts in one issue before me are datelined: Melbourne, Cambridge, Edinburgh, Nassau, Montreal, Copenhagen, Nairobi, Dublin, Hong Kong, Milan, Tokyo, Oslo, and in an array of American cities from New York to Spokane, Miami to Wichita, Philadelphia to Riverside, Calif., is Mobile's chapter meeting held at Edgefield, Chapman.

And in conclusion, The Devil's Dictionary says of the subject:

"Wine, n. Fermented grape-juice known to the Women's Christian Union as 'liquor,' sometimes as 'rum.' Wine, madam, is God's next best gift to man."



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INSTRUMENTS:

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"The history of science, and in particular the history of medicine...is... the history of man's reactions to the truth, the history of the gradual revelation of truth, the history of the gradual liberation of our minds from darkness and prejudice."

— George Sarton, from "The History of Medicine Versus the History of Art"

**Would it be useful
in clinical practice to have
government predetermine
drugs of choice?**

Opinion

Results of a survey of physicians:

13.3%

Yes, it would be useful.

86.7%

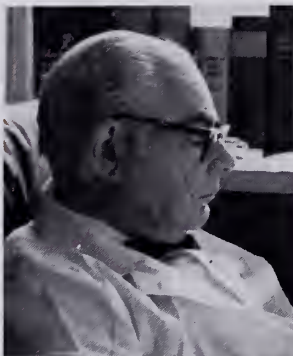
No, it would not be useful.

Opinion & Dialogue

Would it be useful in clinical practice to have government predetermine drugs of choice?

Doctor of Medicine

Walter Modell, M.D.,
Professor of Pharmacology,
Cornell University
Medical College,
Editor,
Clinical Pharmacology
& Therapeutics,
Drugs of Choice,
Rational Drug Therapy



The proposition that government should determine one or two "drugs of choice" within a given therapeutic class reflects the belief that a similarity in molecular structure insures a close similarity in pharmacologic effect. But this is by no means the rule. An obvious example would be in the field of diuretics, where a small change in chemical structure accounts for substantial dif-

ferences in concomitant effects such as potassium excretion.

Any attempt to dictate the "drug of choice" would be complicated by the fact that some populations demonstrate a bimodal distribution in their reaction to drugs. If the data on drug response are mixed for the total population, one drug will appear to be as useful as the other. But if drug response is reported separately for different segments of the population, drug A will be found to be better for one group and drug B for the other.

It may, of course, be possible to determine drugs of choice in particular categories on a broad statistical basis. But there are always certain patients in whom a drug produces odd, unpredictable or idiosyncratic reactions. So, though a drug might statistically be the most useful one in a given situation, individual variations in response might make it the *incorrect* one.

The point I wish to make is that if two, three, four or more drugs in one class are of approximately equal merit, that in itself is justification for their availability. Exceptional cases do arise in which one drug would be useful to a certain

segment of the population and another drug would be of no use at all. In the practice of medicine, the physician must be prepared to treat the routine as well as the unusual case.

Another objection to the determination of a drug of choice is that precise statements of *relative* efficacy are very difficult to make—much more difficult than statements of efficacy. For example, in testing drug efficacy, it is easy to determine the difference between a drug that is effective in treating a condition and one that is not at all effective. Thus, it is fairly easy to determine whether a drug is more effective than a placebo. But if you compare one drug that is effective with another drug that is also effective, and the relative differences between them are very slight, statements of relative efficacy may be very difficult to make with assurance.

I do not mean to imply that relative efficacy statements are not useful or can never be made. With some groups of drugs (e.g., analgesics), extensive study and precise methodology have yielded useful information on relative efficacy. But in most situations, such information can be acquired only through studies encompassing three to five years of use in many more patients than are used to compare drugs with a placebo for the introduction of a drug into commerce. It is really only after practitioners use a drug extensively that relative safety and efficacy

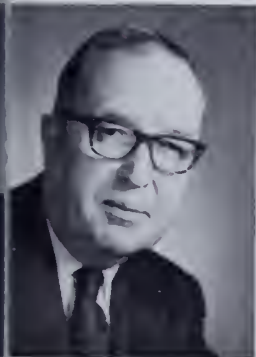
in practice can really be determined.

The Bureau of Drugs has suggested the package insert as a possible means of communicating information on relative efficacy of drugs to the physician. I find this objectionable, since I do not believe the physician should have to rely on this source for final scientific truth. There is also a practical objection: Since few physicians actually dispense drugs, they seldom see the package insert. In any event, I would maintain that the physician should know what drugs are available, their wants and why without depending on the government or the manufacturer to tell him.

Undoubtedly, physicians are swamped by excess numbers of drugs in so many therapeutic categories. As I am well aware that many drugs within such categories could be eliminated without any loss, or perhaps even some profit to the practice of medicine. But, in my opinion, neither the FDA nor any other single group has the expertise and the wisdom necessary to determine the "drug of choice" in all areas of medical practice.

Maker of Medicine

Ernest G. Kohlstaedt, M.D.,
Vice President,
Medical Research,
Eli Lilly and Company



In my opinion, it is not the function of any government or private regulatory agency to designate a "drug of choice." This determination should be made by the physician after he has received full information on the properties of a drug, and then it will be based on his experience with this drug and his knowledge of the individual patient who is seeking treatment. An evaluation of comparative efficacy were to be made, particularly by government, at the time a new drug is being approved for marketing, it would be a disservice to medicine and thus to the patient and the consumer. For example, when a new therapeutic agent is introduced, on the basis of limited knowledge, it may be considered more potent, more effective, or safer than products already on the market. Conceivably, at the time the new drug is labeled "the drug of choice." But as additional clinical experience is accumulated, new evidence becomes available. If, it may be apparent

that the established products should not be so easily dismissed.

Variation in patient response to drugs constitutes one of the major obstacles to the determination of "drugs of choice." We are just beginning to open the door on pharmacogenetics, but it is evident that genetic differences cause wide variations in the way drugs are absorbed, metabolized, etc. This fact alone is sufficient to make unrealistic the idea that there is one drug in each class to be used for every human being.

The problem of determining relative drug efficacy is an extremely complicated one. Comparison with other drugs of the same class should not be a prerequisite for marketing a new substance. In some therapeutic areas, it may be difficult to make accurate comparisons. For example, in the treatment of infections it is not possible to conduct crossover studies. Recovery may be influenced by factors which cannot be controlled or measured, i.e., natural host resistance and virulence of infective agents. A drug's acceptability must often be judged on the basis of its own performance, and this may be limited to experience in a relatively small patient population. If the introduction of a new drug must await the adequate establishment of relative efficacy, the duration of clinical trial and extent of studies would be greatly prolonged, particularly for rare or unusual conditions. The availability of a new drug would be delayed. Many patients might suffer needlessly and lives might be lost.

Relative efficacy can best be established by experience in a general patient population through regular channels of clinical practice. The physician considers the patient as a whole, which means the patient often has multiple problems and drugs must be selected with this in mind. Hence, a "drug of choice" in an uncomplicated case may not be the best drug for a patient with associated problems. Publication of well-controlled studies in medical journals may provide comparative evidence; discussions at medical meetings, presentations at postgraduate courses, and the new audiovisual technology may bring evidence to physicians on comparative therapy. In a free medical marketplace, a drug that does not measure up will fall into disuse. For example, broad clinical experience has established vitamin B₁₂ as the "drug of choice" for the treatment of primary pernicious anemia. No amount of advertising or promotional effort by the manufacturer could increase the use of liver extract for this anemia. How-

ever, a physician may wish to employ parenteral liver preparations for a special purpose.

In the field of surgery, peer review in the hospital has brought significant improvement in the use of new techniques and procedures. Something of this nature would be useful in the area of drug therapy. However, it should be developed by the medical profession itself and would necessitate, for its proper function, an improvement in the dissemination of reliable data on clinical pharmacology of drugs under consideration.

Ideally, information on the relative efficacy of drugs should be gathered and assessed by the physicians who actually administer the specific agents to a specific patient population. To do this, they will need even more information on the drugs they use - information that the pharmaceutical manufacturers must begin to provide if government regulation of "drugs of choice" is to be avoided.

Opinion & Dialogue

What is your opinion, doctor?
Send us your comments on the above issue.



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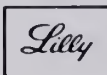
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Number 3

*Psychiatric Aspects Of Sexual Dysfunction In Women

*F. Kant, M. D., Birmingham, Alabama

The general practitioner first, the gynecologist later, and finally the psychiatrist are the physicians who are frequently consulted by women who complain about lack of response in marital relations. Often it is the husband who encourages, or even demands that his wife see a physician, because he is aware that marital relations do not mean anything to his wife. Occasionally the wife may complain of pain during marital relations (dyspareunia). Although this is, in most cases, psychogenic in nature, there is no doubt that it may have an organic basis. Pathologic lesions of various types may be the cause. A psychotherapeutic approach without a preceding, thorough, gynecological examination would be foolhardy. Vaginismus, a rather rare occurrence, belongs to the group of conversion reactions expressing the fear of penetration.

In our discussion, the criterion for frigidity is the absence of a response to sexual stimulation by the opposite sex. Frigid means excessively cold. The woman who is passionately attached and responsive to a member of her own sex is really not frigid in the broad sense of the word. But in our discussion we are concerned with response to the opposite sex. Most women by no means all experience frustration, if they do not achieve an orgasmic response

during sexual intercourse. However some women find satisfaction in the awareness of being wanted by the husband they love and by giving him pleasure. Then the psychosexual adjustment in her marriage can be fulfilling for the wife although she never has an orgasmic response.

Frigidity is not a static problem. It is capable of change due to the underlying dynamics. The classical descriptions of Freud, Steckel, and others published 40 years ago and longer do not give an adequate picture of the attitude of women towards sexual gratification in our present day culture.

Women's attitudes towards sexual gratification have changed. They do not abhor the orgasmic response. To get reliable information more than one interview is required. This becomes clear if we compare answers in early sessions with those in later ones. Facts are not withheld, but awareness is lacking. Frigidity and impotence cannot be equated. Freud, English, and many others felt that frigidity in women is equal to impotence in men. Freud equated anesthetic men with frigid women. However impotent men are usually not anesthetic. Only homosexuals may be anesthetic towards women. For men impotence is always a defeat. It is different in frigid women. Here sexual desire may be so repressed that they actually lose all interest in sexual relations.

Potency of the man is not related to love

*Presented at the meeting of the Gynecological Society on March 30, 1972.

**Clinical Professor of Psychiatry, em. at the University of Alabama Medical College.

as the response is in women. The beauty of the female's body can play a great role in the potency of the male. The feminine woman usually responds more when the male partner means something to her emotionally. In general, sex life in women is on a higher spiritual level than that of men. Frigidity is far more selective than impotence.

The basis for the difference between frigidity and impotence is the difference of the psychological makeup of woman and man. Is this due to biological factors or to cultural and educational factors? Both are involved as well as the first heterosexual experience. If this is disappointing and repeats itself, it can lead to a failure complex as Cline in his paper stated.

As mentioned before, frigidity is not static. A woman may respond in one marriage, but not in the next or the one before. A woman may respond to her lover but not to her husband, or vice versa. Fear of pregnancy can prevent a response.

We will understand sexual dysfunction in women better if we consider the essential traits of feminine sexuality. In a penetrating study Helen Deutsch in her book on the psychology of women named three: passivity, masochism, and narcissism. If we study sexual phantasies of women, the masochistic coloring becomes frequently obvious. We find ideation all the way from seduction to brutal rape. Narcissistic withdrawal is the defense against overly strong masochism.

A case in mind is an attractive 27-year-old, single girl who had many admirers, but was thought to be cold natured. Six years before, she had fallen in love with a boy and had given herself to him completely without any reserve, expecting him to marry her. This did not happen.

Attempting to classify the types of frigid women, we start with:

1. The anesthetic woman; does she exist?
The woman who has never experienced a response with any form of stimulation by the opposite sex, her own sex, or by

self stimulation, who is so to say, asexual. Frequent and deep probing explorations are necessary to rule out any form of sexual feeling. We found seven cases in this category of which four were schizophrenics.

2. The homosexual woman.
3. The woman who is temporarily frigid. Woman's response is very sensitive. A wife might have been sexually well adjusted and responsive, but became frigid towards her husband after she realized that he was having extramarital relations.
4. The narcissistic woman.

The role a woman plays in her psychosexual life is largely moulded in childhood. The relationship the daughter develops towards her parents is essential. An alcoholic brutal father may plant distrust toward all men in the daughter. However, we must not generalize. The opposite may be true. The young girl may develop strong feelings of love for a boy because he is so different from her father. Raised in a family where the parents respect love and show affection for each other, she has the best chance to develop into a secure, warmhearted, and responsive personality.

Successful treatment of frigidity, which is by no means always possible in a specific case, will have to involve wife and husband. The life and previous experiences in the emotional attachments of both will have to be explored. Therese Benedek has stated that in women the quality of the sexual experience depends on the mate, upon his potency, skill and ability to overcome her sexual fear.

However, potency and skill mean little as long as the most important ingredients, respect and affection for the mate, are missing. If the wife has an image of her husband which is inadequate, it is often possible to change her evaluation by giving an understanding of the underlying dynamics and thereby making acceptance possible. If,

however, for example, the husband has become an alcoholic, manifesting crude behavior, acceptance by the wife will not be attempted. He is the one who needs treatment.

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Individual Study To Be Developed At Southern Schools

A federal contract to develop self-learning packages for medical students will be shared by 29 southern medical schools, including the University of Alabama in Birmingham (UAB) School of Medicine.

Members of the Southern Medical School Consortium were granted \$150,000 for the project by the National Institutes of Health, Bethesda, Md.

The goal is to improve the quality of medical education and reduce its cost by providing an array of packages that are less expensive than the traditional lecture method, according to an NIH release.

The packages will be helpful to the student because they are convenient—when the student is ready to go on to a new subject, he may study at his own pace and “play back” the package as often as he wishes, until he feels he has a thorough knowledge of the subject, explained Dr. Earle Bowen, director of educational services at the UAB medical school.

“Among other things, the creation of these units means that lectures could cease to be oral textbooks. With the yearly increase in

size of medical classes, the units will save much faculty time, freeing teachers and extending their abilities and skills. It will allow them to spend their time on individual problem-solving and analysis instead of mass lectures,” said Dr. Bowen.

Dr. Bowen said the packages may consist of booklets, photographs, slides, tape recordings, plastic models, television tapes, special equipment, or any combination of these, according to how the subject matter can best be taught. Materials which are being developed under the contract cover such areas as anatomy, biostatistics, biology, cardiology, family medicine, and surgery.

If the system proves successful, it could be a model for the rest of the country’s medical schools to emulate.

The Consortium is headquartered in Chapel Hill, N. C. Faculty members of each institution will design and test the learning packages before being distributed to southern medical students through the Office of Audiovisual Educational Development—part of the National Library of Medicine.

What To Put In The Nebulizer Of An IPPB Machine

D. S. Tysinger, Jr., M. D.

Dothan, Alabama

There are two schools of thought on what to use in the nebulizers of IPPB machines. These two schools have evolved around the two basic designs of IPPB machines. The first and oldest school is that of the high flow rate, side arm nebulizing machines. This group of machines was originally designed to ventilate and to resuscitate. The aerosol delivery function was added after the basic on-off valve design was fixed. This type of equipment, 1) requires large medication dosage since much of it follows the expiratory path of least resistance and is exhaled out the exhalation valve during expiration, 2) the particles rain out due to high flow, with turbulence in the trachea and main stem bronchi; the remainder of inspiratory flow is often not completely humidified. Medications chosen and solutions used with this type high flow machine are of the kind that are most effective in oral delivery rather than peripheral lung delivery. The trachea, main stem, primary, secondary, tertiary and quaternary bronchi are very small in volume as compared to the remainder of the lungs. Only a slight increase in "flow rate" can produce turbulence and will cause rainout of particles in this area.

The second school is that of the flow rate controlled machines nebulizing only during inspiration. These machines pass the trachea-main stem bronchi barrier and deliver into the periphery of the lungs. This is the type machine around which therapeutic, obstructive and trapping techniques were developed. These machines if properly set will deliver the medications primarily used in the first school's equipment, to the periphery. Medications most effective when

peripherally delivered usually are not effective in school one machines.

What one prescribes and does depends upon what one has been taught. These individuals never question the medications and the rationale behind the teaching. In this instance the effect of available medications in relation to delivery levels is often not expanded upon during the deductive educational process.

A. Medications:

1) *Isoproterenol*: (pH 2.32) This drug is a potent bronchodilator, it is also a potent vasodilator. It became popular because of its apparent effectiveness when delivered with the high flow rate side arm continuously nebulizing machines. It is just as effective in a 1:100 solution and 1:200 solution when put under the tongue.

Any drug directed toward the dilation of the bronchial musculature must get into the blood stream through the left heart to be delivered by the bronchial artery to the musculature of the terminal bronchi. When deposited under the tongue or in the upper trachea, this drug causes vascular dilatation in small areas with an initial rapid local blood level increase followed by a gradually rising systemic titer, thus when used with this high flow type of equipment bronchial artery levels are obtained producing bronchodilatation. *Isoproterenol* is not a natural body catecholamine and should not be used more often than every four (4) hours. When this drug is used in school two (flow rate controllable) equipment, and delivered to the peripheral bronchioles it is dispensed over a broad area; it then produces peribronchial vasodilation in the peribronchial

vasculature resulting in edematous obstruction. Proportionately little is delivered through the left heart to the bronchial musculature. This drug was originally prepared for delivery by hand operated nebulizers and later in high flow rate machines with often disappointing results until phenylephrine was added (this drug is a potent vasoconstrictor, but one with severe rebound). The isoproterenol induced vascular engorgement actually impinges on the airways in areas of deposition and makes the patient worse. Isoproterenol can paralyze the ciliary mucous-excalator for up to four (4) hours.

2) *Racemic Epinephrine*: (pH 2.38) This drug is widely used in school two (variable flow rate) equipment. It is a normally occurring catecholamine and is rapidly metabolized by the body. It is not highly effective when used orally. When the school one equipment became available, clinical studies revealed disappointing results. When a school two machines appeared upon the clinical scene, racemic epinephrine was tried and gave good clinical results. Thus, racemic epinephrine became the drug of choice in the flow rate controlled inspiratory nebulizing machine. This is because the aerosol is peripherally delivered in a topical fashion primarily as a vasoconstrictor, reducing peribronchial swelling and edema. The vasculature dilution factor is of great capacity and being a natural catecholamine, it is rapidly metabolized. Therefore, it can be used frequently; 30 minutes to one hour continuous delivery is well tolerated in severe cases. Racemic epinephrine stimulates the ciliary-mucous excalator to function at more efficient levels.

Where severe bronchospasm is present along with severe peribronchial edema, Isoproterenol 1:100, three drops under the tongue every four (4) hours, and 2.25 per cent solution racemic epinephrine four (4) drops and 100 drops (50 cc) of diluent in the nebulizer every hour, is quite effective and often a useful technique. A solution of

12.5 mg/cc aminophylline makes an ideal diluent for the delivery of aerosolized racemic epinephrine.

3) *Aminophylline*: (pH 8.63) Aminophylline is also a bronchodilator and vasodilator. The concentrated dosage is larger than for isoproterenol or racemic epinephrine. Aminophylline can be used with either isoproterenol or racemic epinephrine, but with the constrictor properties of racemic epinephrine it functions best. The vasodilator properties of isoproterenol and aminophylline tend to support each other, often increasing mucosal and submucosal edema within the tracheobronchial tree.

The most effective concentration of aminophylline for nebulization is a 12.5 mg/cc solution. The pH of the solution is roughly 8.55. In addition to reducing severe bronchospasm in the presence of peribronchial engorgement when in a solution with racemic epinephrine, it is especially useful in life-threatening obstructive emergencies. The tissue and local pH determine catecholamine response. Above pH 7.5, responses are maximum. Below 7.3, they begin to fall off. Below 6.3, there is minimal response. The individual using freonized aerosols, usually vasodilating solutions of isoproterenol, has often developed severe acidotic levels in his peribronchial tissues. Depositing more isoproterenol or racemic epinephrine down the airway is futile. The local acidosis is so severe it will not be effective. At this point, 5cc 12.5 mg/cc aminophylline with pH 8.5 and four (4) drops racemic epinephrine, 2.25 per cent solution, produces a local rise in pH enabling the racemic epinephrine to act topically. Between the bronchodilator and vasoconstrictor actions of the two drugs reversal of the obstructive process is started. Frequently the effects of this combination in the emphysematous patient and in the chronic bronchitic are such that this is the drug combination of choice. 12.5 mg/cc aminophylline with racemic epinephrine can be put in the flow rate controlled IPPB ma-

chine and used PRN by the patient having trouble with intermittent wheezing.

4) *Cortisone*: Cortisone is an anti-inflammatory drug, bronchodilator and vasodilator. Its most effective use is in situations that are inflammatory, acute and dangerous, and in membrane diffusion problems. Oral dosage is far more effective. It has been recommended for the "adrenalin-fast patient" (the patient with localized tissue acidosis). 12.5 mg/cc aminophylline works better. Like isoproterenol (a vasodilator), cortisone can be delivered through the oral and tracheal mucous membrane. Therefore, this drug can effectively be delivered by high flow rate machines that rain out in the upper airway. Whereas aminophylline solutions must be delivered peripherally to effectively alter local pH. Therefore, if a high flow rate side arm device is being used to deliver these drugs, cortisone may be more useful than aminophylline. Cortisone is a dangerous drug if delivered into the lungs for protracted periods of time; secondary changes may rapidly occur. They are not dose related because of individual tolerance.

5) *Acetylcystein*: This drug thins mucous, by breaking down the protein molecules at the acetylated bonds. It will function as long as there are bonds to reduce. A major limitation of this drug is its ability to make secretions so thin that the expulsive cough and ciliary mucous escalator mechanisms cannot effectively function. It does have an offensive odor and may cause severe bronchospasm. It is best administered in dilute solutions with free flow atomizer type nebulizers for controlled periods of time. Its use in IPPB apparatus is not recommended.

6) *Dornivac*: This enzyme digest necrotic tissue, and is primarily useful in such conditions as bronchiectasis, abscesses, etc. In this type of circumstance if combined with a bronchodilator routine and good pulmonary physiotherapy (postural drainage, etc.), rapid improvement can be obtained. After infection is controlled, it is used until sputum becomes mucoid. Then ethanol and water or aminophylline 12.5 mg/cc plus racemic

epinephrine is used routinely to maintain improvement. This drug is not for long term use (three to four days at most). As chemical debridement occurs, bleeding from the raw under surfaces can occur. Bleeding should be watched for and if it occurs Dornivac should be discontinued; solutions using diluents of ethanol and water or aminophylline with racemic epinephrine should be substituted.

7) *Chlor-trimeton Malate*: (pH 5.0) (The intramuscular solution is used.) This antihistamine, though it causes some drying, is effective in the acute asthmatic states. Tissue histamine levels in the lungs are often very high in either allergic or hypoxic states. In status asthmaticus both are present. Other antihistamines have not worked as well; why Chlor-trimeton is superior is not known. The routine dose is 30-40 mg Chlor-trimeton Malate in 5 cc water at low flow rates. Before the 5 cc is exhausted, the patient usually is breathing better. This is normally followed after 5 minutes with three drops 2.25% racemic epinephrine diluted with 5cc 12.5 mg/cc aminophylline. This solution is delivered in a low flow main stream inspiratory nebulizing machine. This procedure does not work with high flow rate, side arm machines that nebulize constantly and rain out in the trachea.

When proper equipment and procedure is used and followed, the acute status involvement is soon ameliorated.

8) There are other commercially recommended combinations of drugs with fabulous claims. Few pan out. One promising drug is *isoetherine*, which acts like isoproterenol but without some of the side effects. This drug, however, is mixed with a solution causing high cohesive forces and severe rebound phenomenon (glyceryl, phenylephrine, etc.). If this drug was available in an effective oral form alone, it would have great importance.

9) Aerosols employing glycerine type agents that have high cohesive forces cause agglutination with large particle size forma-

tion leading to rain-out in the trachea and upper airways. Because of this inherent property, they should not be used in aerosols for peripheral delivery. Solutions with very high cohesive forces have not and will not be discussed because they should not be used. Some of the glycolates, etc., used by industry to sterilize air also fall into this category due to their irritable effect on pulmonary tissues.

B. Solutions Used In The Nebulizer:

Diluents used in the nebulizer in the treatment of obstructive pulmonary diseases should support distribution of the basic drugs used and also be effective on their own merits. The history of what has been used in medical nebulizers is rather barbaric in its full extent. Physicians treating cystic fibrosis, etc., were so engulfed in finding something that would be effective that they would try anything that demonstrate possibilities in a test tube. The bronchial tubes and lung structures are not made of glass and thus in many instances a worse chemical bronchitis was induced and frequently not recognized.

Any aerosol that produces discomfort and a burning sensation in the chest is irritating the tracheobronchial tree, or drying it out.

For the ciliary mucous escalator to function normally, it must have sufficient moisture and a nominal pH range. Optimal pH range is 6.0-8.5; best 7.0-7.5. The normal pH of the tracheobronchial tree is 6.0-7.2 in a healthy normal state. During disease related infective process it is between 7.2-8.5. During this defensive period and at this pH, the ciliary mucous escalator is the most effective, secretions most active, and protection greatest. Solutions below pH 6.0 immobilize the ciliary mucous escalator with potential damage to the mucosa and very acid sluffing of the mucous membrane can occur and in some instances squamous metaplasia.

Some drugs such as isoproterenol depress the ciliary mucous escalator. Other drugs, like racemic epinephrine and ephedrine,

stimulate it to higher levels of motility.

Since normal lung has to be medicated during inhalational therapy before abnormal lung can be ventilated and topically treated, the solution in the nebulizer should not irritate normal lung tissue. With low flow rate equipment, alveolar delivery is possible and thus the effect of inhaled solutions on alveolar surfactant is important. Water denatures surfactant, normal saline does not. Alcohol solutions have a low surface tension (22.2 dynes/cmH₂O at 20°C, 19.8 at 50°C) and will tend to support surfactant effect. Aminophylline is of high pH and does not destroy or support. In equipment that can deliver to the alveolar levels the delivery of substances with high surface tensions into the alveoli will with sufficient deposition cause alveolar instability and collapse. The surface tension of serum is 58 dynes/cm; the surface tension of water is 70 dynes/cm at 28°C, 71.95 dynes/cm at 27°C; saline 72.75 dynes/cm; alcohol 22.2 dynes/cm at 20°C, 19.8 dynes/cm at 50°C; etc. Water does not need to denature surfactant, it only has to line the alveolus in sufficient quantity to cause alveolar collapse.

The determining factors in considering surface tensions are cohesive and adhesive forces. Solutions with high cohesive and low adhesive properties are contraindicated for use in the lungs. Most of these agents absorb water rather than provide molecular reserve and thus cause drying rather than wetting of pulmonary structures.

Since the pH of solutions is important, a brief review of pH is in order. Pure distilled water is pH 7.0; tap water may vary; average is pH 6.4-6.8; normal saline is pH 5.25; 20% alcohol (ethanol) and water (tap) pH 6.26; vodka and water pH 6.86; and 12.5 mg/cc aminophylline in tap water, pH 8.61; Isoproterenol 1:200 pH 2.32; racemic epinephrine 2.25% solution pH 2.38. Due to solutions made up of drug and diluent combinations basic pH values can be altered.

The pressor effect of racemic epinephrine is immeasurably small below pH 6.30. The

maximum pressor effect occurs at a pH above 7.58. Thus, to be topically effective on the surface, aerosols should be delivered in solutions with an appropriate pH. Surface pH, not solution pH, determines effect on tissues, but solution pH determines the inflammatory effect on the lining of the tracheobronchial tree upon which the solution has been deposited before affecting submucosal tissues.

One other important general factor is particle size. Nebulizers are powered by dry air, and the nebulizer output is mixed with all inspiratory gases going to the patient. All inspired air is slowly warmed up to body temperature. To maintain humidity while warming is occurring, water molecules escape from the aerosolized particles, reducing the particle size and concentrating the agents in the aerosolized solution because only water is vaporizing. Normal saline after evaporative reconcentration in the nebulizer is delivered to the tissue as hypertonic saline.

It takes 0.44 cc/min water to humidify one liter of dry air to 100 per cent at body temperature. A nebulizer/humidifier should deliver sufficient particulate moisture to accomplish this and have adequate particulate reserve to deliver peripheral medications. A machine nebulizing 5cc in 15 minutes puts out 0.334 cc/min. This amount if totally vaporized for saturating purposes will humidify 7L/min. of air. As a gauge 0.5cc water/min. will humidify 11.4L/min. air; 0.75cc water/min. will humidify 17L/min. air; 1.0cc water/min. will humidify 22.7L/min. air; 1.25cc water/min. will humidify 28.4L/min. of air; 1.50cc water/min. will humidify 34.2 L/min. air. There will be no reserve for the peripheral delivery of medications.

A high flow rate machine can normally generate a combined nebulizer and venturi jet flow of 45-50L/min. at 15cmH₂O pressure. This type machine must deliver 2.0cc water/min. just to humidify 45L/min. air; or 2.2cc/min. to humidify 50L/min. flow. This should make obvious the water volume re-

quired to humidify the total inspiratory gas volume alone. This is why the marked concentration of agents in solution are being delivered to the periphery of the lungs. Another important point is that in addition to jet and nebulizer flow, venturi entrainment provides another inspiratory source gas that must be humidified. If room air at a certain temperature is 100 per cent humidified, at body temperature it is only 50 per cent humidified. Thus, at body temperature a 75L/min. entrainment would still be the equivalent of 371/2L/min. to be 100 per cent humidified. If room saturation is less than 100 per cent then more water molecules must be added. This can more than double the amount of water necessary. In the intermittent nebulizing machines, nebulization occurs only during the inspiratory phase. Thus, inspiration being expressed as 1/3 and expiration 2/3, the machine if run 15 minutes is only on five minutes. This would mean if the machine nebulizes 5cc in 15 minutes, it nebulizes 1cc/min. or the equivalent in humidity of 22.1L/min. Since the total machine outflow including jet, nebulizer, and entrainment flow is 25-33 L/min. If this flow is only occurring 1/3 of a minute flows are actually 8.3-11.7L/min. to be humidified by this flow, which would use 0.334cc-0.5cc for humidity if entrainment flow were dry, leaving 0.6-0.5cc delivery, or 5,000,000-6,000,000 particles/min. for delivery. Particle minimum for effective delivery is 100 particles/cm³ of air, particle size 2-5 micron. Maximum particle numbers are 1,000/cm³ (above this number particle collision, growth and rain-out becomes mammoth). This amounts to 100,000 particles/L to 1,000,000 particles/L for best delivery. Nebulizer output should be sufficient to 100 per cent humidify at body temperature and supply between 100-1,000 particles/cc.

This is a major important difference between the two types of machines, and explains a lot about their results.

In demonstrating IPPB machines, nebulization is often visually highlighted. The truth of the matter is, the nebulizer runs at

about 15°C below ambient room temperature, at 25°C (room) temperature it takes only 0.023cc to humidify air 100 per cent. Thus, at room temperature 0.334cc will humidify 14.5L/min. The nebulizer is working and air flow out the mouthpiece is about 10°C instead of 25°C. At 10°C it takes 0.007cc/L of air (at 15°C it takes 0.0105cc water/L of air). Thus, at nebulizer temperature there is enough to humidify 47.7L/min. at a nebulizer output of 0.334cc/min. With a nebulizer output of 0.50cc/min. there is enough humidity for 71.4L/min. If the air from nebulizer to mouthpiece is warmed up by 5°C, then it takes 0.0105cc/L of air to 100 per cent humidify. Thus, at this level nebulizing 0.334cc/min would humidify 31.8L/min. nebulizing 0.5cc/min. it would humidify 47.6/Lmin. Because of the demand for humidity at various temperatures as demonstrated, it is easy to show good particle delivery with any equipment. As air is warmed to body temperature. However, it is not so. If the nebulizer output from the mouthpiece is put through a 12' long 10mm tube heated to body temperature and kept stable there, then the particles delivered out the other end will be more indicative of patient delivery, and is very disappointing indeed.

Twenty per cent ethanol solutions in the nebulizer concentrate to about 70 per cent on delivery. Solutions such as water pH 6.5 and isoproterenol pH 2.32 buffered with HCL when mixed end up with a pH of 3.375 in the nebulizer and become even more acidic due to molecular water escape. Solutions that will not give up molecular water upon demand should not be used to humidify inspiratory gases because they tend to produce a drying of the upper airway. Solutions that take up water are potentially greater driers than dry gases themselves.

1) **WATER:** Water may be distilled, with a pH of 6.8-7.3. Tap water varies with the purification system. Average is pH 6.54. If run through a deionizing purifier, there is a drop to pH 5.2. Water denatures surfactant if delivered to the alveolar regions, and will

cause alveolar collapse and atelectasis. The surface tension of water is around 70 dynes/cm varying with temperature.

Water modifies secretions thick or thin by increasing adhesive and decreasing cohesive forces within the secretions so they become less viscid and can be mobilized by the ciliary mucous escalator, or by expulsive coughing. Water delivered by itself is useful. Mixtures of water and isoproterenol have a pH of 3.64 (water pH 6.5-7.0; isoproterenol pH 2.32). During the process of delivery, molecular escape to maintain relative humidity increases concentration and a more acid pH develops. The same is true of water and racemic epinephrine which has a pH of 2.38.

Water should not be used as a vehicle of delivery for racemic epinephrine or isoproterenol when factors of pH are considered. Water alone is much preferred where water is indicated.

2) **NORMAL SALINE:** Normal saline has a pH of 5.25 and a surface tension of 72 dynes/cm depending on temperature. Some solutions used for irrigation are buffered; these should not be used for diluents. Normal saline does not denature surfactant, however hypertonic salt solutions (which is what is delivered) does denature surfactant. Saline, due to its osmotic makeup, adds only slightly to adhesive and does not reduce cohesive forces to the extent that water does. It is not as effective as water for loosening up secretions.

Mixtures of saline and isoproterenol or racemic epinephrine are more acidic than saline alone. Particle decay and increasing concentrations due to molecular escape make saline more irritating on delivery due to the increasing hypertonicity as concentrations rise. Where normal saline aerosol is prescribed, a ¼ normal saline should be used in the nebulizer.

During the alveolar delivery of aerosols with high surface tensions, the surfactant hysteresis will be reduced leading to alveolar collapse.

3) **ETHANOL AND WATER:** (pH 6.26-6.86) Surface tension 20 dynes/cm. Ethanol and water concentrates during delivery. When used in 20 per cent solution (Vodka 80 proof 50:50 mixed with water). There are no demonstrated conditions in which it is contraindicated. Alcohol lowers surface tension. On delivery it is to a certain extent antibacterial. It supports alveolar stability. It is of a pH that will be effective and not harmful. It does not provide a vehicle for effective isoproterenol delivery. Those who question the use of ethanol solutions are those who still are trying to justify high flow rate machines for therapeutic aerosol delivery. Alcohol and water alone, as has been the case with isoproterenol, has been demonstrated to paralyze the ciliary mucous escalator. However, when racemic epinephrine is added to water ciliary mucous escalator activity is increased. Thus, ethanol and isoproterenol solutions can act almost synergistically to impair function of the ciliary escalator; solutions of ethanol and isoproterenol could compromise any therapeutic regime.

Ethanol is a safe, good and effective vehicle for bronchodilator delivery when used in flow rate controllable equipment, and when proper procedure is followed.

4) 12- $\frac{1}{2}$ mgm/cc **AMINOPHYLLIN:** (pH 8.61 when mixed with racemic epinephrine 2.25 per cent solution, pH 8.5). Aminophyllin has already been discussed.

Aminophyllin is also a good and very useful diluent for medication delivery as well as being effective by itself.

In tracheotomized patients and animals where theophylline 12- $\frac{1}{2}$ mgm/cc and racemic epinephrine 2.25 per cent solution 3-4 drops were used frequently there was observed markedly less squamous metaplasia than with any other solution. When generally available, theophylline 12.5mg/cc may become the diluent of choice for racemic epinephrine.

5) There are many combinations of glycerin, glycol, etc., with high cohesive forces

and improper pH. Since these agents have no true place in inhalation therapy, they will not be discussed. Instead, criteria for inhalation therapy solutions and mixtures will be presented.

The use of increased oxygen partial pressures in IPPB machines causes an increased rate of oxidation of the bronchodilator-vasoconstrictor catecholamines and increased vaporization rates of medications. All IPPB machines should be run on compressed air for medication delivery unless oxygen is specifically indicated.

Criteria For Inhalation Therapy Solutions

- 1) Must have pH between 6.0-8.5.
- 2) Must have sufficiently low surface tension to prevent alveolar collapse upon alveolar delivery.
- 3) Must be nonirritating to mucous membranes of normal and diseased lung.
- 4) Must have high adhesive low cohesive forces. This is to prevent particle agglutination and growth leading to premature rainout in the machine tubing, mouth and upper airway.
- 5) Must have sufficient water content to allow up to a $\frac{3}{4}$ water loss for humidification without reconcentrating solutions beyond tolerance levels irritating to bronchial mucous membranes.
- 6) Should not denature or adversely effect the surfactant properties of the alveolus.
- 7) Should not impair ciliary function and ideally increase the ciliary mucous escalator. It should where possible improve and support the ciliary escalator function.

If the prescribing physician will utilize this information and use the proper pharmacological approach toward nebulization with a low flow IPPB device, he can expect superior clinical results. Under this regime the patient gets more satisfactory and helpful cardiopulmonary care. The therapist earns greater recognition. Inhalational therapy will continue to prove its efficacy.

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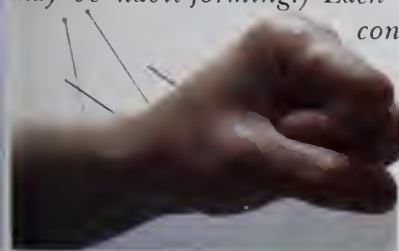
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Indications: Pro-Banthine is effective as adjunctive therapy in the treatment of peptic ulcer. Dosage must be adjusted to the individual.

Contraindications: Glaucoma, obstructive disease of the gastrointestinal tract, obstructive uropathy, intestinal atony, toxic megacolon, hiatal hernia associated with reflux esophagitis or unstable cardiovascular adjustment in acute hemorrhage.

Warnings: Patients with severe cardiac disease should be given this medication with caution. Fever and possibly heat stroke may occur due to anhidrosis.

In theory a curare-like action may occur, with possible loss of voluntary muscle control. For such patients prompt and continuing artificial respiration should be applied until the drug effect has been exhausted.

Diarrhea in an ileostomy patient may indicate obstruction, and this possibility should be considered before administering Pro-Banthine.

Precautions: Since varying degrees of urinary hesitancy may be evidenced by elderly males

with prostatic hypertrophy, such patients should be advised to micturate at the time of taking the medication.

Overdosage should be avoided in patients severely ill with ulcerative colitis.

Adverse Reactions: Varying degrees of drying of salivary secretions may occur as well as mydriasis and blurred vision. In addition the following adverse reactions have been reported: nervousness, drowsiness, dizziness, insomnia, headache, loss of the sense of taste, nausea, vomiting, constipation, impotence and allergic dermatitis.

Dosage and Administration: The recommended daily dosage for adult oral therapy is one 15-mg. tablet with meals and two at bedtime. Subsequent adjustment to the patient's requirements and tolerance must be made.

How Supplied: Pro-Banthine is supplied as tablets of 15 and 7.5 mg., as prolonged-acting tablets of 30 mg. and, for parenteral use, as serum-type vials of 30 mg.

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Fathers and Sons in Medicine

Since 1918 Lee County Has Had A Dr. Thomas



BENJAMIN FRANKLIN THOMAS I, II, & III

There has been a Benjamin Franklin Thomas practicing medicine in Lee County, Alabama, since before the Kaiser fled his defeated Germany in World War I.

That was 1918, when the senior of that name went to Opelika a year after graduation with his M. D. degree from Emory University in Atlanta. And it was in the same year—13 June 1918—that a son was born in St. Margaret's Hospital, Montgomery, and named Benjamin Franklin Thomas, Jr.

The third of that name is now a senior in Medicine at Emory, the same school from which his father and grandfather received their M. D. degrees.

To begin at the beginning, the first of that celebrated given name was born at Salem, Alabama on Tuesday, 13 February 1894, in that same Lee County where he is in general practice to this day.

While he was an Auburn freshman he decided on medicine as a profession and transferred to the University of Alabama's Medical College, Mobile, again transferring two years later to Emory, from where he was graduated in 1917, just two months after

the United States declared war on Germany. He was married in that same year to Miss Olive Bourne of Staten Island, N. Y., while attending New York Polyclinic.

After five years of general practice in Opelika, with the family doubled from two to four, Dr. Thomas moved his family and his practice from Opelika to Auburn, where they have resided ever since. The young doctor was named college physician.

In addition to the future Dr. Thomas, Jr., there arrived a daughter, whom they named Mary Olive. Miss Thomas is today an English professor at Georgia State College, Atlanta.

Dr. Thomas served as college physician from 1923 to 1939, entering the service of his country shortly after Pearl Harbor. He served for three and a half years, attaining the rank of major.

Meantime, Benjamin Franklin Thomas, Jr., was graduated from Auburn High School and went on to Auburn University (1936-39), before transferring to medical school at Emory, from where he was graduated in 1943, just before his 25th birthday. He in-

turned at Hillman, Birmingham, and was assistant resident surgeon in 1944 when he went into service, seeing two years of active duty, most of it in the South Pacific, Japan and Korea, earning one campaign star for his service ribbon.

At Emory the junior Thomas met and married a Rhode Island girl, Thelma Simister, and four children have been born to them—the eldest and youngest sons, the middle two daughters. The two daughters are both attending Auburn University, one

a junior, one a sophomore, and both majoring in French. The younger son, John, is 15.

Benjamin Franklin Thomas III, a senior medical student at Emory, will be a month past his 25th birthday—born on Thursday, 14 August 1947—when this article about the three Thomases in medicine is scheduled to appear. Although he has expressed an interest in surgery, BFT III told his father recently that 60 percent of this senior class was aiming for the general practice of medicine.

OUNCES OF PREVENTION

Stemming the Rising Tide of Medical Malpractice Claims and Lawsuits

Two or three generations ago, the practice of medicine followed a pattern of one-to-one relationships.

The family had its family doctor. When he died or retired, they found a new family doctor. To most people, most of the time, the whole healing art was represented by a single physician.

Such malpractice litigation as occurred followed the same pattern. When a claim was made, it reflected a personal grievance by one patient or family against one doctor. Even the adversary relationship was still a one-to-one relationship.

This is no longer true. To the ordinary person today, medical practice is symbolized by a host of specialists, most of whom he has seen only once or twice and will probably never meet again. The general practitioner, except for minor afflictions, functions largely as a middleman. (And the general practitioner's son is training for a specialty.)

The adversary relationship, too, has lost its one-to-one complexion. The typical modern malpractice lawsuit is brought against several physicians. If there has been hospitalization, any doctor whose name ap-

pears on the chart is likely to be included in the pleadings. Today's patient doesn't sue a doctor. He sues the system.

To withstand the rising tide of malpractice claims and lawsuits, the medical fellowship must *organize* for its own defense. Malpractice litigation is an attack on the entire medical community, and the best answer to an organized attack is an organized defense.

The Medical Society of the State of Alabama offers its members a program to accomplish this. Insurance is only a part of it. The primary objective is to combine the skills and strengths of the doctors of Alabama to resist and defeat fraudulent, groundless, and exaggerated claims for alleged medical malpractice.

For total success, the program must have total support. For near-total success, it must have near-total support. It's as simple as that. Every Alabama physician who *belongs to our Association and supports our program* makes more certain our ultimate victory over the malpractice litigation epidemic. Every doctor who remains outside is postponing it.

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Current Medicare Information

Effect of Phase II Controls on Allowable Charges Under Medicare (Part B)

The allowable charge, on which Medicare Part B payment is based, may not exceed the lowest of (1) the physician's or supplier's customary charge for the service, (2) the prevailing charges in the locality for similar services, or (3) the charge applicable for comparable services, under comparable circumstances to the policyholders or subscribers of the carrier.

Under present SSA regulations, allowable charges are updated annually to take into account the actual charges physicians and suppliers have billed for covered services in the immediately preceding calendar year. The revised allowable charge levels go into effect on July 1st of each year or as soon thereafter as they can be incorporated into the carrier's payment system. Thus, for the 12-month period beginning July 1, 1972, the allowable charge levels will be calculated from actual charge levels for calendar year 1971.

However, because of a ruling by the Price Commission, *only 40% of these calculated increases in allowable charge levels can be recognized for the 12-month period beginning July 1, 1972.*

The ruling of the Price Commission is that the Medicare allowable charges in effect on November 13, 1971, must be considered as *base prices* for Phase II purposes, and that, as a result, they may not be increased by more than 2.5 percent in the aggregate during the fiscal year beginning July 1, 1972. Based on actual increases in physician and supplier billings in calendar year 1971, the charges allowed under the Medicare program for the 12-month period beginning July 1, 1972, would have been increased by about 6.2 percent in the aggregate. To implement the Price Commission's ruling, therefore, only 40 per cent (2.5 is about 40 percent of 6.2) of the increases that would ordinarily

have been allowed will be recognized in calculating allowable charges for the fiscal year beginning July 1, 1972.

Part A Coverage of Inpatient Hospital Rehabilitation Services

BHI has amplified its guidelines for Part A coverage of inpatient rehabilitation services in a hospital setting. These new guidelines were developed with the considerable assistance of experts in rehabilitation medicine, and reflect pre-publication comments from intermediaries, providers and professional organizations.

The guidelines explain the circumstances that will support Medicare coverage of inpatient hospital services for (1) the initial evaluation period necessary to determine a patient's rehabilitation potential and (2) the subsequent provision of services to carry out an established rehabilitation program based upon this evaluation. In general, a patient is considered to require a hospital level of rehabilitation care if he needs—and the hospital is capable of providing—a relatively intense rehabilitation evaluation and services program which requires a multidisciplinary coordinated team approach for upgrading the patient's ability to function as independently as possible. A program of this scope would usually include intensive skilled rehabilitation nursing care, physical therapy, occupational therapy, and, when needed, speech therapy, and prosthetic-orthotic services, as well as participation by a psychologist and social worker to help resolve any psychological and social problems which might impede rehabilitation. The coordination and direction of these services would be under the continuing supervision of a physician with special training or experience in the field of rehabilitation.

Concurrently with their release to intermediaries, these new coverage guidelines have been issued directly to all hospitals as part of the Hospital Manual.

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and the Latin *sedatus*,
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Relative Efficacy

When the Government Decides What Drug Should Be Prescribed,
Is the Patient Better Served?

In the fall of 1971, several officials of the Food and Drug Administration began stating that drug manufacturers should provide information on the comparative usefulness of their medications in the treatment of specific conditions. Such "relative efficacy" data they said should be made part of the prescribing information supplied to physicians in drug product labeling.

To persons familiar with the history of the Food, Drug, and Cosmetic Act, the statements from FDA were far from novel. Indeed, the matter had been thoroughly discussed a decade before, when Congress was in the process of enacting the 1962 Amendments to the Act.

At that time, Secretary of Health, Education, and Welfare, Abraham Ribicoff, stated unequivocally that those who had expressed concern that the new law might be used to permit the Federal Government to make relative efficacy judgments had "no basis for such apprehensions." The proposed amendments, he stressed, "would merely require a showing that the new drug described in the application is safe for use and is effective in

use, under conditions prescribed, recommended or suggested, in the labeling thereof. This would not require a showing of relatively greater efficacy than that of other drugs. It would merely require that a drug claimed to be effective for a particular purpose had been demonstrated by sound scientific procedures to be effective for that purpose. In short, it must live up to the claims made for it."¹

When asked specifically if FDA wanted the power to decide relative efficacy, Secretary Ribicoff answered, "We do not seek it. We do not want it. And my testimony indicated we do not intend to pass on it . . . We do not want to pass on relative efficacy. We do not want to say that drug A is better than drug B or B is greater than C. We are not looking for that at all, and we do not think it is necessary."

Colorado Senator John A. Carroll pursued the matter still further, noting: "you know, some of the doctors have testified that they themselves do not know that drugs operate differently on different people." Mr. Ribicoff

(Continued on Page 202)

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Administrator

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coff agreed, "Absolutely correct . . . We would not and do not intend and do not want to pass on relative efficacy. This is no power we seek and no power we desire."²

It would be difficult to express a more clearcut denial of any intention to act to determine relative efficacy than that of the former HEW Secretary.

Yet it appears that a change in the Department's stated position is intended by some at FDA, apparently on the unsupportable grounds that drug labeling, which does not indicate the product's relative position on a therapeutic scale, is not fully informative, or is somehow false or misleading.

In order to follow that reasoning, one must assume that a prescribing priority system can be clearly established, and, if so, that the Federal Government should be the judging agency.

And that is the crux of the matter.

The question of whether relative efficacy *should* be judged by the government is preceded by the question of whether it *can* be accurately determined. For some drugs, a consensus of expert opinion has been reached. In these cases, the less desirable drug has either vanished (bromides for anxiety, mercurials for diuresis), or has shrunk to prescribing levels justified by the advantages it retains (veratrum for hypertension, sulfonamides for infection). Results of this sort do not require government intervention. On the contrary, it may well be that attempts to impose consensus by fiat rather than by scientific and professional interaction would have had a counterproductive effect.

That leaves many areas of therapy and many groups of drugs for which a consensus has not been reached. Can the government line up, for example, all of the drugs in use against high blood pressure, and meaningfully arrange them in order of efficacy? If so, the physician's task could be simplified immensely.

But the answer to this question is *no*.

A number of controlled studies have failed to show any significant difference in efficacy between the major antihypertensive drugs.³ Yet, while the experts in the field and the prescribing physicians may be at odds not one seems to claim that the major antihypertensive drugs now available are indistinguishable with respect to efficacy or usefulness.

While informed experts decline to make arbitrary judgments about the order in which particular drug products should be used, legislation is now pending (S. 2812, 92nd Congress) that would prevent the marketing of any drug not proven to be better than those already available. Had this bill been in effect when the first thiazide diuretics reached the market, it seems likely that only a handful would be available. Researchers, encouraged to proceed even if their discoveries were only modest, found more than a dozen such products, offering the physician a broad range of activity to meet his patient's needs. And, the availability of these alternatives has doubtless been a factor in the reduction—by about 15% at wholesale—in the price of the average diuretic.

It is thus impossible to justify the relative efficacy requirement from an economic point of view, let alone a medical one.

Still, some FDA employees are ready to decide such issues. According to the *Washington Post* of October 24, 1971, "some [FDA] scientists say that the diuretic market is saturated. 'We need another diuretic like a hole in the head' one FDA scientist said."

The question asks itself: Do the American people want FDA deciding when the last diuretic has been discovered, or instead do they wish to see further research leading to improved diuretics encouraged?

In this connection, it is noteworthy that early tests of a drug often fail to uncover some of its best advantages. For example:

(Continued on Page 205)

vacation in
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"the Donnatal[®] Effect"

	each tablet, capsule or 5 cc. teaspoonful of elixir (23% alcohol)	each Donnatal No. 2	each Extentab [®]
hyoscyamine sulfate	0.1037 mg.	0.1037 mg.	0.3111 mg.
atropine sulfate	0.0194 mg.	0.0194 mg.	0.0582 mg.
hyoscine hydrobromide	0.0065 mg.	0.0065 mg.	0.0195 mg.
phenobarbital	($\frac{1}{4}$ gr.) 16.2 mg.	($\frac{1}{2}$ gr.) 32.4 mg.	($\frac{3}{4}$ gr.) 48.6 mg.
(warning: may be habit forming)			

Brief summary. Side effects: Blurring of vision, dry mouth, difficult urination, and flushing or dryness of the skin may occur on higher dosage levels, rarely on usual dosage. Administer with caution to patients with incipient glaucoma or urinary bladder neck obstruction as in prostatic hypertrophy. Contraindicated in patients with acute glaucoma, advanced renal or hepatic disease or hypersensitivity to any of the ingredients.

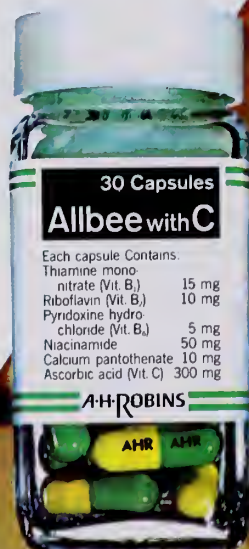
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A-H ROBINS



(Continued from Page 202)

+The early research on dimenhydrinate was directed toward its antihistaminic properties; only late in the program was another of its characteristics—its usefulness against motion sickness—noticed;

+The first research using the phenothiazines was in sedation; the drugs' cardinal value in psychoses came to clinicians' attention later;

+Again, the value of isoproterenol in shock, of mafenide acetate in burns, and of lidocaine in cardiac arrhythmia, were not recognized for years after their widespread use for other, less important medical indications.

Had FDA taken the shortsighted position then that one or two good drugs for each therapeutic need should suffice, the drugs just mentioned might never have been marketed; FDA could have said, in each case, that still another antihistamine, another sedative, one more cardiac stimulant, yet another topical antibacterial, and another local anesthetic—was not needed.

Because FDA did not make such arguments when these drugs were before them for approval, hundreds of thousands of patients have benefited enormously, in many cases to the extent of recovering the chance to live.

Similarly, there is a difference of medical opinion on the value of antihistamines, corticosteroids and sympathomimetic agents against allergy, with no clearcut consensus on the issue. A lack of unanimity also exists with respect to the therapy of peptic ulcer, where anticholinergics and antacids are used, and in various musculoskeletal conditions, where some advocate muscle relaxants and others order only phenobarbital, much depends on the particular patient.

In such cases, FDA traditionally has followed the lawfully required and prudent course of letting the relative merits of the drug be found through experience, once the general questions of safety and efficacy have

been answered. The National Academy of Sciences/National Research Council's 1969 Drug Efficacy Study commented on the point:

"The final arbiter of the value of a drug is the consensus of the experience of critical physicians in its use in the practice of medicine over a period of years. Approval of a new drug for release to the market is only a license to seek this experience."

That process has been responsible for the large array of steroids of value in contraception, for example, and for the development of new drugs for the management of gout and diabetes. In each of these areas, seemingly trivial differences in the drug not infrequently make major differences to patients—and make arbitrary relative efficacy judgments impossible.

Even in the case of the antibiotics, where it is often assumed that it is easy to match the medication against the disease, it is not uncommon to find authoritative disagreements as to the drugs of first choice (or second and third for that matter). For example, one well-known medical guide⁴ suggests that the drug of first choice in the treatment of acute gonococcal infections is procaine penicillin G, and that a tetracycline or erythromycin may be used as alternatives; a second and equally respected book⁵ mentions no alternatives; a third⁶ lists erythromycin ahead of tetracycline, and adds a cephalosporin to the list for the physician to consider; still another book⁷ does not list any of the alternates listed in⁴ and⁶, but adds six separate penicillinase-resistant penicillins, and (any) sulfonamide. None of the referenced guides mentions spectinomycin, a relatively new (1971) antibiotic that has been the subject of numerous favorable reports.

Clearly, there is no unanimity as to the precise ranking of the alternates to penicillin G in treating gonococcal infections; indeed, there is no agreement as to what the alternatives are.

It must be borne in mind that the physician is not only dealing with a disease, which may follow a varied course, but also with an individual patient, whose reactions to the drugs prescribed may be crucial to the outcome of the therapy. Because the individual patient's reactions can make it dangerous to give him what for most patients is the "drug of choice", the physician must be permitted freedom to use his own judgment.

Recognizing the importance of allowing the doctors' judgment to prevail, Cornell University's Peter Dineen, M. D., in his chapter on antibacterial drugs in the 1970-71 *Drugs of Choice* wrote:

"Clinical knowledge is often the method used in selecting a drug, and it may be the best. Properly applied it combines a knowledge of experimental and clinical evidence of the efficacy various drugs with personal clinical experience. Once the infecting organism is identified, therefore, a reasonable selection of drugs can be made based on experience and knowledge."

Louis Weinstein, Ph. D., M. D., of Tufts, in his chapter on the chemotherapy of microbial diseases in the Goodman and Gilman text, put it another way:

"Presentation of choices of specific agents for the treatment of various infections is always provocative of discussion and disagreement because such choices often represent the distillate of personal experiences that may not duplicate those of others . . . To complicate matters, sensitivity patterns of a number of micro-organisms often vary with the hospital or clinic in which they are isolated . . . The material presented in this table represents the practice of the author based on his experience with the management of these infections. It is not intended to suggest that the indicated choices are necessarily those of other physi-

cians or that the order is absolute . . ."

And, Dr. Louis Lasagna, head of the University of Rochester Medical School's department of pharmacology and toxicology, has observed:

"Progress could be defined as discovering truths that are unrecognized or unaccepted by the experts. As someone who has been dubbed an expert by others, and who rather enjoys the privileges that go with that label, I am not suggesting that expertise has no utility in this world. But the experts can err—witness the thromboembolic hazards of the Pill, or the clinical reports (so long derided) on the antidepressant properties of phenothiazines, or the growing body of knowledge that USP standards (concocted by experts) are inadequate. (And, what is more, the experts often disagree among themselves—if you doubt this, poll any group of experts on the antibiotics of choice to be used in treating septicemia of unknown origin.)" (*Clinical Pharmacology and Therapeutics* 11:3, p. 443).

If there is a difference of expert opinion and a need for flexibility in the selection of antibiotics, that need is doubly evident in the selection of many other modes of therapy, where the causative agent or factors may well be less clearly understood, and the characteristics that distinguish one useful drug from another may be considerably less discreet. In the treatment of psychotic disorders, for example, it is widely acknowledged that the relative value of one major tranquilizer as against the others cannot be determined in advance, even though these agents have been under careful and aggressive study for more than 20 years.

Again, the choice of digitalis preparations still presents a challenge, although physi-

(Continued on Page 208)

Alabama's first Medical Practice Act, adopted in 1819, spoke out against those practicing medicine who "shall bleed, apply a blister of Spanish flies, administer calomel, opium or laudanum."

BLUE CROSS-BLUE SHIELD OF ALABAMA



(Continued from Page 206)

cians have studied the use of various forms of these cardiac drugs for about three millennia. Still, according to digitalis authorities Gordon K. Moe, Ph. D., M. D., and Alfred E. Farah, M. D. in Goodman & Gilman (p. 700), "What really matters is not so much the choice or purity of preparations, but the wisdom with which the drug is used by the physician."

Recent research in pharmacology indicates that there may well be a sound scientific foundation for recognizing the full importance of the use of skillful case-by-case judgment that cannot be performed by experts or authorities absent from the patient-doctor transaction.

The four main factors in a therapeutic relationship are: (1) Physician prescribes (2) drug against (3) disease of (4) the patient. The notion of relative efficacy assumes that for a given disease (factor 3), drugs can be ranked independent of physician (factor 1) and patient (factor 4). This assumption is false. Recent discoveries suggest that the individuality of the patient, and of the physician, play very important roles in determining the effectiveness of drug treatment.

In one review⁸ we read:

"Although it has been recognized for many years that patient-environmental variation is important in determining drug effects, only recently has it been appreciated that genetic factors may play a large part in subtle drug-patient variation. Not all drug-patient variations can be ascribed to genetic factors, but the increasing use of metabolic blocking drugs and enzyme inducing drugs has heightened the clinical awareness of possible subtle pharmacogenic problems."

In the area of mental illness, at least, there are increasing suggestions that the importance and effectiveness of drug therapy vary markedly depending, in part, upon the therapist's experience, values, and personality.⁹

Dr. Louis Lasagna discussed the value of relative efficacy information during a January, 1972 conference at the University of Rochester. "To be against information on relative efficacy," he said, "is to be against apple pie, mother love, and the American flag. It turns out, however, that relative efficacy is very difficult to assess . . . How nice it would be to have controlled trials data on all those drugs in patients who have for example, angina, coronary heart failure, hypertension, melancholia and asthma—but the mind boggles as you think about doing these trials."

Supposing, for example, that a new anti-thyroid drug was marketed, Dr. Lasagna posited that "You might say, 'Well, shouldn't the doctor know how this drug fits in, in terms of relative efficacy, relative toxicity, with other drugs, radio-activity, surgery—a few of the major modalities available for treating hyperthyroidism?' It would be nice again indeed; but again, the prospects of coming up with controlled trials comparing all of those simultaneously is pretty remote."

Moreover, there is a real question as to whether the cost of designing meaningful, definitive studies would be even remotely justified by the patient benefits to be expected. In most therapeutic classes, the number of distinct drug entities of value in treating a particular condition is small, frequently less than a dozen. Broadly speaking, the pharmacological effects of the group can usually be described, as is done in any of the standard texts of therapeutics. Using this information, and adding his own background and experience, the physician chooses one compound, basing his choice on the particular therapeutic (or economic) qualities it offers his patient.

Rather than expend limited clinical research resources testing one well-known drug against another, the prudent use of those resources clearly lies in the development of entirely new compounds.

Meanwhile, information on the relative place of marketed drugs, weighing their
(Continued on Page 210)

It Was Once Considered Funny . . .

The Irish doctor's reply to how he treated venereal disease:

"With Contimpt!"

Truth is, he had no idea how to treat it anyhow.

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(Continued from Page 208)

therapeutic indexes against alternate therapy, is being collected and published in the usual ways. Better data on the overall ratio of desired effects to unwanted ones, which characterizes a given group of compounds when used in a particular situation, assists the physician, not merely in choosing a given drug, but also in selecting from alternative classes of compounds of possible value to the patient.

The provision, by their peers, of information for physicians' guidance is, of course, a far different thing than the provision of even the same information by the federal government, whose "guidelines" more often than not carry the force of law. The question naturally arises: What does it mean when the government—as distinguished from a private body or expert—asserts that Drug A is the one of first choice in Condition A? What is the physician's legal position if, on the basis of his personal experience and educational background, he responsibly disagrees?

The question has been raised many times, and in various ways. Over the years FDA officials have challenged distinguished clinicians and practicing doctors who openly advocate usage of prescription drugs in conditions and at dosage levels not indicated in the FDA-approved labeling.

In 1967, for example, Dr. Walter Modell reported that FDA lawyers were claiming that "publishers, authors and editors who have written, approved and published drug dosages which deviate from those recommended by the FDA are liable for damages . . ." Objecting to this as regulation of medicine by fiat, "to which all doctors will have to turn like Holy Writ when they seek help on drugs," Dr. Modell called attention to the danger of letting FDA assume such power. "There must be free and unrestricted expression of opinion and publication of experience with drugs already officially described and delimited in FDA stuffers," he said, "if progress is to be made in therapeu-

tics and if egregious errors, one way or the other, by the FDA, are to be promptly published and rectified."

Moreover, he said, "in the case of every single drug, the determination of actual efficacy, proper dosage, and safe use requires substantial experience by the expert as well as by the general practitioner. It is held by many that it takes about five years before a definitive statement can be made about a new drug."

The issue was rejoined in 1970, when FDA Bureau of Drugs Director Henry Simmons, M. D., advised doctors that whenever they intended to prescribe a medication for use in a manner not approved in the official FDA labeling, they should first file a "Notice of Claimed Investigational Exemption for a New Drug" form.

AMA's Department of Drugs objected vigorously, fearing that "the FDA proposes to approve, forbid, monitor, collect, collate, evaluate, and disseminate results of all clinical experience with drugs in this country that is not consistent with package insert recommendations, regardless of the agency's statutory jurisdiction . . . We believe the FDA should devote full attention to meeting its statutory obligations, not attempt to expand its statutory grant by regulating the practice of medicine."

AMA stressed that "the physician should always remember a subtle but important distinction: The FDA has no legal authority to approve the uses of marketed drugs; it approves what a manufacturer may say about these uses in its labeling and advertising."¹⁰ Earlier, AMA had published its belief that "the package insert is part of the labeling of a drug and not a legal restriction on the thoughtful and careful use of a drug by an informed physician."¹¹

That "subtle but important distinction" has never been acknowledged by the FDA, however, and increasingly, in liability actions brought against physicians, failure to adhere to the labeling recommendations is being portrayed by medical malpractice

lawyers as *ipso facto* evidence of wrongdoing. Recognizing this, the American Academy of Family Physicians, in an April 7, 1972 letter to FDA, said that relative efficacy judgments in government-approved labeling would carry the threat of "implied police power, if in no other way by the threat of such regulations being used as a 'club' in malpractice suits." The Academy, which represents 31,000 family physicians, urged that FDA abandon any plans to require relative efficacy statements.

One of the most astute students of the regulatory process in drugs worldwide is Sir Derrick Dunlop, the recently retired head of Britain's Medicines Commission, a sister agency to the FDA. Speaking at a symposium in Geneva in September 1971, Sir Derrick summed up the limits of regulatory power in the area of efficacy rulings by official regulators thus:

"I do not believe that opinion on matters of efficacy should be formed by bureaucratic bodies, but rather through the free process of scientific publication, debate and undergraduate and postgraduate education. There is a danger that as regulatory agencies arrogate to themselves more and more the duty of dogmatizing on the efficacy of medicines, that a so-called learned medical profession will eventually be reduced to signing forms entitling their patients to obtain such medicines as the regulatory agencies say they may have."

In a parallel vein, the Pharmaceutical Manufacturers Association wrote to the Commissioner of FDA on December 23, 1971, asking for a statement of intention from the agency on relative efficacy. "No authority exists in the stated terms of the statutes authorizing these activities by FDA," PMA President C. Joseph Stetler wrote, "nor is there any implied authority which might be derived from the legislative history of the Act."

Since pursuance of the plan to require relative efficacy statements "would signi-

ficantly distort the practice of medicine," Stetler asked for an early clarification of FDA's position.

Four months later, in an address to the PMA's Annual Meeting, FDA Commissioner Edwards told PMA that "the physician—and he alone—can judge" the choice of medication, and that "FDA does not intend, through labeling, to preempt his judgment." But then he added that "if all drugs are properly labeled, relative efficacy ceases to be an issue."

The question, of course, is what is proper labeling?

It is the general rule for FDA to interpret its regulatory powers very broadly; it may therefore be assumed that some agency personnel might deem it necessary for a "properly labeled" drug product to include relative efficacy information. It is imperative that the professions, the pharmaceutical industry and the public be alerted to the dangers of any official action or unannounced application of such a position by the Food and Drug Administration. There must be general recognition that labeling requirements by FDA in the area of relative effectiveness, to the extent that they are given medical and juridical recognition, would represent a fundamental new departure for American medicine, under Federal control, unlike that found in any other national system. In the end, much will depend on how effectively physicians and consumers express their desire to avoid bureaucratic control of this sort, and how well they demonstrate that such procedures do not serve the public interest.

June, 1972

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Vaccine For Heart Disease?

A Louisiana researcher has reported what he believes is a connection between viruses and heart disease, according to the National Society for Medical Research. If this possibility exists, so does the possibility of developing a vaccine to prevent some cases of heart disease.

Dr. George E. Burch, chairman of Tulane University's Department of Medicine, says the viruses involved probably include those which are the most frequent causes of the common cold. He also believes that these viruses may be causing some kidney disease, stillbirths, arteriosclerosis and diabetes.

Dr. Burch emphasizes that although these virus infections occur often, the more serious complications (i.e. heart disease) may only happen when a special factor is present in a victim.

One possibility he has suggested is that some genetic factor might be triggered into activity when a viral infection occurs.

The internist injected the coxsackie B4 virus—one that is the most common cause of upper respiratory infections in man—into several thousand newborn mice over a period of years and found that almost 100 per cent

developed heart damage. Approximately 55 per cent had damage to their heart valves.

Working with squirrel monkeys, Dr. Burch substantiated his findings with the mice. His control animals were not injected with the virus, and lesions did not develop within their hearts.

Although it has never been proven experimentally, the belief has existed that the streptococcus bacillus—the cause of many sore throats—is the cause of rheumatic fever since strep infections are very often present before the onset of the fever.

He could not use people as he did experimental animals, so the investigator had to study the hearts from over 100 routine autopsies at the New Orleans Charity Hospital.

Dr. Burch found the evidence of viral infection that he was looking for in young and old hearts. The information he has gathered has convinced him that if known or unknown viruses are causing some cases of heart disease then there is a chance that a vaccine could be developed to combat the long-range effects of the virus.

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He explains that heart disease is probably not as common as cold infections because they are merely the first step, and every person is not necessarily predisposed to the events which may occur after the initial infection. A streptococcus infection may make a person susceptible to rheumatic fever, and, in turn, make that individual susceptible to heart disease.

Other diseases, such as arteriosclerosis,

may also be triggered by a mild viral infection, Dr. Burch has theorized. He suggests that perhaps cholesterol, calcium and other cellular material might gather in the areas scarred by the infection, and eventually harden.

More information is necessary before Dr. Burch's conclusions can be tested on humans. Perhaps more research involving laboratory animals will furnish medicine with that information.

A Certification Program For Physicians' Assistants

A new national project leading to the certification of physicians' assistants is being undertaken by the American Medical Association and the National Board of Medical Examiners.

The announcement was made jointly by Max H. Parrott, M. D., Chairman of the American Medical Association's Board of Trustees and John P. Hubbard, M. D., President of the National Board.

The objective of the project is to determine the best way of developing nationally validated certifying examinations that will ensure the orderly development of the concept of the assistant to the primary care physician.

A physician's assistant is a skilled person qualified by academic and practical training to provide patient services under the supervision and direction of a licensed physician who is responsible for the performance of that assistant.

Both Dr. Hubbard and Dr. Malcolm C. Todd, Chairman of the AMA Council on Health Manpower, emphasized the importance and the challenge of developing an examination for such a new and evolving occupation as the physician's assistant.

They noted that the construction of a valid and reliable examination is a complex and lengthy process. The study announced today is the first step in this process. Consequently, the certification examination may not be available for administration before the end of 1973.

The new program reflects the action of AMA's House of Delegates last December which directed AMA's Council on Health Manpower to assume a leadership role in establishing national certification for the assistant to the primary care physician.

At its recent meeting, the AMA Board of Trustees formally approved a proposal that the Council on Health Manpower collaborate with the National Board of Medical Examiners in development of an examination for certification.

Concurrently, the National Board of Medical Examiners, at its Annual Meeting, had recognized the urgent need to develop valid and reliable certification examinations for this category of health personnel and had directed the staff to take appropriate steps to meet this need.

The joint proposal further recommends

(Continued on Page 216)

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creation by the AMA of a national advisory body on certification of physicians' assistants to counsel the AMA and the National Board in general policy decisions concerning the certification program.

In addition, the National Board will appoint such committees as it deems necessary

to deal with evaluation of competence and development of the certification examination. There will be interlocking membership between the AMA advisory body and the National Board committees. The National Board of Medical Examiners is undertaking to obtain the necessary financial support needed for the study and development of the new program.

Manufactured Food May Be The Answer

Recent developments in the use of soybeans for human food may be among the greatest economic breakthroughs in relieving the world's shortage of protein, according to scientists at the University of Alabama in Birmingham (UAB).

Until a few years ago soybeans were used principally for the production of oil, and the left-over residue or "press-cake" was used for animal feeding. Despite its high quality as a protein food, people objected to its "mushy" consistency.

Now, food technologists have developed a method to spin the protein into fibers using techniques similar to those used in making nylon and rayon. The fibers are made into products with the appearance, texture and flavor of beef, chicken, pork, or fish.

A team of UAB experts recently completed detailed tests on the adequacy of soybean foods in human nutrition. Their studies involved eight volunteers who lived for six-week periods on an experimental diet in which a "synthetic chicken" product was the only source of protein.

"To our surprise," said Dr. Charles Butterworth, head of the UAB School of Medicine's nutrition program, "the spun fibers of soy protein were as active in maintaining the health of the volunteers as ordinary high-quality proteins such as meat, eggs, and dairy products." Egg-white is added to glue the fibers together in the manufacturing process; but, according to the UAB scientists, the amount of egg-white is not enough to

account for the nutritional value of the food.

"It is well known that a mixture of certain proteins can provide a product that is better than either protein by itself. Apparently the small amount of egg-protein extends the nutritional value of the soy-bean protein," said Dr. Butterworth.

Dr. Butterworth noted that a major advantage of using plant proteins for human food is cost. At present the soy products are priced competitively with meats, and many observers expect the price to go down with increased consumer demand.

Scientists speculate that there may be other advantages. Food proteins based on spun vegetable fibers are quite low in saturated fats and may be prepared with vegetable oils, a procedure recommended by some authorities for reducing the risk of coronary heart disease. Another advantage may be the fact that the soy protein contains less of the amino acid methionine which is relatively abundant in meat. Methionine has been indicated as a possible cause of arteriosclerosis (hardening of the arteries) in experimental animals.

Dr. Butterworth was assisted in his studies by Dr. Ronald E. Turk, an assistant professor at Loma Linda University Medical School; Dr. Philip E. Cornwell, a microbiologist at the UAB Medical Center; and Dianne Brooks, assistant director of the dietetic internship program at UAB's University Hospital. A preliminary report of their research has been published in the American Journal of Clinical Nutrition.

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Pinworm therapy is often a family affair



Contraindications: History of hypersensitivity to thiabendazole.

Warnings: If hypersensitivity reactions occur, drug should be discontinued immediately and not resumed. Rarely, erythema multiforme has been associated with thiabendazole therapy; in severe cases (Stevens-Johnson syndrome), fatalities have occurred. Because CNS side effects may occur quite frequently, activities requiring mental alertness should be avoided. Safe use in pregnancy or lactation has not been established.

Precautions: Ideally, supportive therapy is indicated for anemic, dehydrated, or malnourished patients prior to initiation of anthelmintic therapy. In presence of hepatic or renal dysfunction,

patients should be carefully monitored.

Adverse Reactions: Most frequently encountered are anorexia, nausea, vomiting, and dizziness. Less frequently, diarrhea, epigastric distress, pruritus, weariness, drowsiness, giddiness, and headache have occurred. Rarely, tinnitus, hyperirritability, numbness, abnormal sensation in eyes, blurring of vision, xanthopsia; hypotension, collapse; enuresis; transient rise in cephalin flocculation and SGOT; perianal rash, cholestasis and parenchymal liver damage; hyperglycemia; transient leukopenia; malodor of the urine, crystalluria, hematuria; appearance of *Ascaris* in the mouth and nose. Hypersensitivity reactions

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For more detailed information, consult your MSD representative or see the Direction Circular. Merck Sharp & Dohme, Division of Merck & Co., Inc., West Point, Pa. 19486

INDICATION | DOSAGE SCHEDULE

MINTEZOL[®] (Thiabendazole, MSD) has demonstrated effectiveness against a broad spectrum of nematode infestations, whether encountered singly or in combination. Dosages are weight related; therefore, a weight-dose chart is included in the Direction Circular for your convenience when writing a prescription. MINTEZOL should be given after meals if possible.

INDICATIONS	DOSAGE (1st Day)	ADDITIONAL REGIMEN	COMMENTS
Pinworm disease	Two doses of 1 tablet/50 lb	Repeat 7 days later	This regimen is designed to reduce the risk of reinfection. However, if not practical, repeat the regimen the next day.
Threadworm,* large roundworm,* hookworm,* and whipworm* disease	Two doses of 1 tablet/50 lb	Repeat the next day	Alternatively, a single dose of 2 tablets/50 lb may be given. However, a higher incidence of side effects should be expected.
Creeping eruption	Two doses of 1 tablet/50 lb	Repeat the next day	If active lesions are still present 2 days after completing this regimen, a second course is recommended.
Symptoms of trichinosis* during the invasive phase of the disease	Two doses of 1 tablet/50 lb	Repeat for 2 to 4 successive days	The optimal dosage for the treatment of trichinosis has not been established.

The recommended maximal daily dosage is 3 g (6 tablets).

*Clinical experience with thiabendazole for treatment of each of these conditions in children weighing less than 30 lb has been limited.



Antivert[®] (meclizine HCl) for vertigo*

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Indicated in the management of nausea, vomiting and dizziness associated with motion sickness.

Found useful in the management of vertigo associated with diseases affecting the vestibular system.

Available as Antivert[®] (12.5 mg. meclizine HCl) blue and white scored tablets and also Antivert[®]/25 (25 mg. meclizine HCl) yellow and white scored tablets.

INDICATIONS. Based on a review of this drug by the National Academy of Sciences-National Research Council and/or other information, FDA has classified the indications as follows:

Effective: Management of nausea and vomiting and dizziness associated with motion sickness.

Possibly Effective: Management of vertigo associated with diseases affecting the vestibular system.

Final classification of the less than effective indications requires further investigation.

CONTRAINDICATIONS. Administration of Antivert during pregnancy or to women who may become pregnant is contraindicated in view of the teratogenic effect of the drug in rats.

The administration of meclizine to pregnant rats during the 12th-15th day of gestation has produced cleft palate in the offspring. Limited studies using doses of over 100 mg./kg./day in rabbits and 10 mg./kg./day in pigs and monkeys did not show cleft palate. Congeners of meclizine have caused cleft palate in species other than the rat.

Meclizine HCl is contraindicated in individuals who have shown a previous hypersensitivity to it.

WARNINGS. Since drowsiness may, on occasion, occur with use of this drug, patients should be warned of this possibility and cautioned against driving a car or operating dangerous machinery.

Usage in Children: Clinical studies establishing safety and effectiveness in children have not been done; therefore, usage is not recommended in the pediatric age group.

Usage in Pregnancy: See "Contraindications."

ADVERSE REACTIONS. Drowsiness, dry mouth and, on rare occasions, blurred vision have been reported.

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"Total Communication" May Be The Key To Education For The Deaf Child

The impact of an exciting, new approach to educating deaf children is being felt in the Birmingham area.

The approach, called "total communication," has been tested with amazing results in a three-year project funded by the Department of Health, Education and Welfare's Office of Education and conducted by the Birmingham Public School System and the University of Alabama in Birmingham (UAB) Medical Center.

Total communication uses every available form of communication that will help the deaf child learn language, the key to education. Speech is emphasized, but the child employs all types of communication: lip reading, finger spelling, sign language, writing and reading, according to the UAB rehabilitative audiologist Dr. Gwenyth R. Vaughn and Ted Fuller, principal of Birmingham's Speech and Hearing Center.

"For many years, parents have been told that their deaf children should be educated strictly through speech and lip reading," they said. "But that approach failed because the deaf were expected to acquire language through a medium geared to the world of the hearing child. Deaf children cannot gather sufficient information from the fleeting movements of lips during speech to perform successfully in school, to communicate with their friends, and to participate as active members of a family group.

"Even if a deaf child learned to speak reasonably well under the old system, he was unable to cope with all the information that the hearing child received through his ears," the directors said. "Our project has demonstrated that if oral, manual, and written communication systems are used according to the deaf child's individual needs, he is able to learn about the world more effectively."

Since the project began in 1969, 99 deaf



SAY AH-H-H . . . Project worker Shirley Gilchrist checks the structure of this little girl's mouth. Structural defects of the oral cavity often prevents the deaf child from learning to speak well—an added handicap to his deafness.

children at Birmingham's Speech and Hearing Center are successfully acquiring language by practicing total communication. "I noted two little boys at the school one day who were 'arguing' in sign language," said Dr. Vaughn. "There was a time when language was a big mystery to them, but with total communication they can express themselves as well as you or I."

A special concern of Fuller has been the individual child. "We have been able, through the project, to give each child med-



TOTAL COMMUNICATION IN PROGRESS . . .

A cameraman records a child's ability to "speak" to project worker Shirley Gilchrist via total communication. Films made in the project's beginning are being compared to current ones so that teachers and parents can see how each child has progressed.

ical, dental, and psychological examinations. These tests, coupled with the regular speech, language, and achievement tests administered each year at the school, have helped us to design special programs for each child."

After the personalized programs have been established, teachers and speech therapists help deaf children develop their speech. Since they cannot hear sounds to imitate, it is difficult for them to master the oral aspect of communicating unless they receive individualized help.

Fuller and Vaughn praised the parents of the deaf children who participated in the project. "When we take a deaf child into our classrooms at three, his language concepts are poorly developed," they said. "The education of deaf children should begin as soon after birth as possible, in order to take advantage of the years in which the most rapid learning takes place. Parents should be taught how to use total communication with their children as soon as a hearing loss is suspected.

"In spite of the handicap imposed upon these children by not having adequate communication until they enter school, the deaf children are proving that they can be edu-

cated. Their new ability to communicate won't be meaningful, however, if families, friends, and the rest of the hearing society don't meet them halfway by also learning total communication."

The project directors cited the case of one deaf child with whom no one could communicate, who thought he was in heaven upon awaking after surgery. "No one had been able to explain to him what was going to happen," they stated. "This problem can be eliminated for today's deaf children, if parents see the need to learn finger spelling. It is equal to writing one's thoughts on paper, only quicker."

The project's many participants and supporters are confident that total communication is a breakthrough in deaf education. According to Fuller and Vaughn, Alabama will be among the first to experience the new method in terms of personalized education to meet the needs of each deaf child.

"A person who hears cannot understand how shut off from the rest of the world the deaf are," they said. "For the first time, thanks to total communication, we are inviting them to join us."

AMA Physician's Recognition Award Recipients

Recipients of the American Medical Association's Physicians Recognition Award have been announced by that organization. Members of MASA who have completed the required continuing medical education courses in order to qualify for the award are:

Jeff Hixon Beard, M. D., Mobile; Terrell Bedford Bird, M. D., Birmingham; Robert Shaw Bowling, M. D., Jackson; Jerry Dean Dillard, M. D., Selma; Samuel Eichold, II, M. D., Mobile; Sara Will Crews Finley, M. D., Birmingham;

George William Hansberry, M. D., Deca-

tur; William W. Johnston, M. D., Gadsden; Edward Russell March, Jr., M. D., Mobile; Walter Clayton McCoy, M. D., Birmingham; James T. Montgomery, M. D., Birmingham; Hugh Clare Nickson, M. D., Gadsden; Frank J. Nuckols, M. D., Birmingham;

Charles William Ramey, M. D., McCalla; James Edgar Ramsey, M. D., Fairfield; J. Walden Retan, M. D., Birmingham; Samuel M. Richardson, III, M. D., Atmore; Hardin M. Ritchey, M. D., Birmingham; Robert E. Roth, M. D., Birmingham; James Franklin Stanley, M. D., Enterprise.



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Before

3/29/67 Before therapy with 5%-FU cream. Patient P. T. shows a moderately severe solar keratotic involvement. Note residual scarring from the previous cryosurgical and electrosurgical procedures on forehead and ridge of nose adjacent to periauricular area.

After

6/12/67 Seven weeks after cessation of therapy. Reactions have subsided. Residual scarring is not seen except for that due to prior surgery. Inflammation has disappeared and face is clear of keratotic lesions.





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and it actinic, solar or senile keratoses,
any regard it as "precancerous."^{1,2}

Topical fluorouracil, considered by some dermatologists to be a major advance in the treatment of multiple solar keratoses,^{3,4} offers the physician a relatively inexpensive alternative to cryosurgery, electrodesiccation and cold knife surgery. Of the topical fluorouracils available, only Efudex offers 2% and 5% solution and 5% cream formulations—formulations that have proved effective in the treatment of these multiple lesions.

Usual duration of therapy, 2 to 4 weeks.

Studies showed that with the 2% and 5% Efudex preparations, the usual duration of therapy was only 2 to 4 weeks.⁵ Other studies with topical fluorouracil revealed that when concentrations of less than 2% were used, significant numbers of lesions recurred.⁶

That's the lesions you can't see, too.

Subclinical lesions, not apparent prior to 2% and 5% Efudex therapy, manifested themselves by definite reactions, while intervening skin remained relatively unaffected.⁵ The early eradication of these subclinical lesions (which may otherwise have undergone further progression) probably accounts for the reduced incidence of future solar keratoses in patients treated with topical fluorouracil—especially with 5% concentrations.⁶

How to identify solar keratoses.

Typically, the lesion—a flat or slightly elevated brown to red-brown papule—is dry, rough, adherent and sharply defined. Multiple lesions are the rule.

Predictable therapeutic response.

Response to a typical course of Efudex therapy is usually characteristic and predictable. After 3 or 4 days of treatment, erythema begins to appear in the area of keratoses. This is followed by a moderate to severe inflammatory response, scaling and occasionally moderate burning or pain. The height of this response generally occurs two to three days after the start of therapy and then begins to subside as treatment is stopped. Within two weeks of discontinuing medication, the inflammation is usually gone. Lesions that do not respond should be biopsied.

Sources: 1. Allen, A. C.: *The Skin, A Clinicopathological Treatise*, ed. 2, New York, McGraw-Hill, 1967, p. 842. 2. Dillaha, C. J.; Jansen, G. T., and Honeycutt, W. M.: "Treatment of Actinic Keratoses with Topical Fluorouracil," in Waisman, M. (ed.): *Acne and Actinic Keratoses in Dermatology*, Springfield, Ill., Charles C Thomas, 1968, p. 13. 3. Belisario, J. C.: *Cutis*, 6:293, 1970. 4. Sams, W. M.: *Arch. Derm.*, 97:14, 1968. 5. On file, Hoffmann-La Roche Inc., Nutley, New Jersey. 6. Williams, A. C., and others: *Cancer*, 25:450, 1970.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Multiple actinic or solar keratoses.

Contraindications: Patients with known hypersensitivity to any of its components.

Warnings: If occlusive dressing used, may increase inflammatory reactions in adjacent normal skin. Avoid prolonged exposure to ultraviolet rays. Safe use in pregnancy not established.

Precautions: If applied with fingers, wash hands immediately. Apply with care near eyes, nose and mouth. Lesions failing to respond or recurring should be biopsied.

Adverse Reactions: Local—pain, pruritus, hyperpigmentation and burning at application site most frequent; also dermatitis, scarring, soreness and tenderness. Also reported—insomnia, stomatitis, suppuration, scaling, swelling, irritability, medicinal taste, photosensitivity, lacrimation, leukocytosis, thrombocytopenia, toxic granulation and eosinophilia.

Dosage and Administration: Apply sufficient quantity to cover lesion twice daily with nonmetal applicator or suitable glove. Usual duration of therapy is 2 to 4 weeks.

How Supplied: Solution, 10-ml drop dispensers—containing 2% or 5% fluorouracil on a weight/weight basis, compounded with propylene glycol, tris(hydroxymethyl)aminomethane, hydroxypropyl cellulose, parabens (methyl and propyl) and disodium edetate.

Cream, 25-Gm tubes—containing 5% fluorouracil in a vanishing cream base consisting of white petrolatum, stearyl alcohol, propylene glycol, polysorbate 60 and parabens (methyl and propyl).



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PHYSICIAN PLACEMENT SERVICE IN ALABAMA

The Physician Placement Service of the Medical Association of the State of Alabama is designed to assist both physicians and communities. MASA members having knowledge of practice opportunities or wishing to relocate their own practices are urged to communicate with the Placement Service. For further information: write Mr. Emmett Wyatt, Executive Assistant, Medical Association of the State of Alabama, 19 South Jackson Street, Montgomery, Alabama 36104, or Telephone 263-6441.

Locations Wanted

General Practice—

Age 32; University of Texas, Southwestern, 1968; seeking institutional practice; Available January 1973. LW-3/3

Age 41; Temple University, 1963; National Board; Board eligible; seeking associate or group practice; Available December 1972. LW-3/4

Age 45; Medical School of Iowa, 1956; Board certified; seeking associate, group, industrial, institutional practice or emergency room, student health - teaching family practice; Available September 1, 1972. LW-3/6

Age 56; Ohio State Univ., 1943; Board certified; seeking associate, group, industrial, or institutional practice. LW-3/7

Internal Medicine—

Age 31; Medical College of Alabama, 1968; National Board; Available July 1972. LW-13/6

Age 29; Emory University School of Medicine, 1966; Board eligible, seeking group practice. Available July 1972. LW-4/5

Age 31; University of Miami, 1964; Board certified, seeking group or institutional practice. Available January 1973. LW-4/7

Age 29; National University of Mexico, 1966; seeking group or institutional practice; Available July 15, 1972. LW-4/13

Age 33; Cornell University, 1966; National Board; Board certified; seeking assistant or associate practice. LW-4/14

Age 30; Univ. of Virginia, 1967; Board eligible; seeking group practice; Available June 30, 1973. LW-4/15

Age 30; Vanderbilt University, 1967; National Board; Board eligible; seeking solo, associate, or group practice; Available July, 1973. LW-4/16

Neurology

Age 30; Northwestern University, 1967; National Board; Board eligible; seeking solo, associate, or group practice; Available June 1973. LW-5/1

Obstetrics-Gynecology—

Age 49; Marquette University, 1945; Board certified; seeking institutional practice. LW-15/1

Age 57; Marquette University, 1943; Board certified; seeking industrial, institutional or clinical practice. LW-15/2

Ophthalmology—

Age 31; Chicago Medical School, 1966; National Board; seeking associate or group practice; Available July, 1973. LW-6/6

Age 32; State University of New York at Buffalo, 1966; National Board; seeking associate practice; Available July 1972. LW-6/7

Age 42; George Washington University, 1959; National Board; Board certified; seeking group or institutional practice; Available 1972. LW-6/8

Orthopedic Surgery—

Age 34; University of California, 1963; seeking group or associate practice. Available July 1972. LW-14/1

Age 31, Temple University, 1965; National Board; seeking group or associate practice. Available July 1972. LW-14/2

University of Illinois, 1965; National Board; seeking group or associate practice. Available July 1, 1972. LW-14/3

Age 31; University of Alabama, 1966; National Board; Available July, 1973. LW-14/4

Age 31; Baylor, 1966; Board eligible; seeking associate practice; available July, 1973. LW-14/5

Otolaryngology—

Age 32; Tulane University Medical School, 1965; Board certified; seeking solo, associate, or group practice; Available September 1, 1972. LW-16/2

Radiology—

Age 30; Medical College of Virginia, 1966; National Board, seeking solo or associate practice. Available June 1972. LW-10/4

Age 31; Medical College of Georgia, 1966; National Board; Board certified; seeking group practice; Available August 1, 1972. LW-10/6

Age 31; University of Iowa, 1966; seeking assistant or associate practice; Available October 1, 1972. LW-10/8

Age 32; Louisiana State, 1966; Available September 1, 1972. LW-10/9

Age 43; Univ. of Tennessee, 1962; Available July 1, 1973. LW-10/10

PLACEMENT SERVICE

Age 33; Univ. of Kentucky, 1966; Board eligible; seeking solo, associate, or group practice; Available November, 1972. LW-10/11

Surgery—

Age 33; University of Maryland, 1965; seeking solo, group, or associate practice; Available July 1973. LW-11/7

Age 33; University of Tennessee, 1967; seeking practice in General Surgery. Available July 1972. LW-11/8

Age 48; Duke University, 1947; National Board; Board certified; seeking group practice in general surgery; Available July 1, 1972. LW-11/9

Age 39; Creighton University School of Medicine, 1957; National Board; Board certified; seeking associate or group practice; Available June, 1972. LW-11/10

Age 32; Medical College of Virginia, 1965; Board eligible; seeking associate or group practice; Available August, 1972. LW-11/13

Age 35; Univ. of Oklahoma, 1964; Board eligible; seeking associate or group practice; Available Jan. 1, 1973. LW-11/14

Urology—

Age 34; Medical College of Georgia, 1967; seeking group or associate practice; Available July 1972. LW-12/1

Age 36; Louisiana State University Medical School, 1961; Board eligible; seeking associate practice; Available December, 1972. LW-12/4

Age 35; Univ. of Miami, 1964; National Board; Board eligible; seeking associate, group, or institutional practice; Available Jan. 1973. LW-12/5



Physicians Wanted

Special Openings—

Wanted, qualified physicians in either OB-GYN, Internal Medicine, or Thoracic Vascular Surgery, to practice with group clinic. The clinic is a 16 man multi-specialty group, and is located in a city of 35,000 with a trade area of 160,000. Excellent recreational facilities and educational opportunities in the area. PW-14

Opportunity for Internist, Board Certified or eligible, interested in Cardiology, in town of 11,000 population—service area 40,000—south Alabama. Modern 86-Bed (JCAH) general hospital with 8-Bed Combination Intensive and Coronary Care Unit under construction. Seven GP's, Certified Surgeon, Radiologist—excellent city school system. PW-15

Internists—one or two needed in University town of 40,000 plus population in Southeast Alabama—Young vigorous multi-specialty group—Generous initial salary and early partnership. PW-16

Internists, Board-certified or eligible. One needed now and another in 1 or 2 years. For early partnership with internist in south Alabama city of 40,000 plus population. New office building adjacent to 181-bed hospital. Practice largely hospital in-patient and Cardiology. PW-21

Opportunity for a Board certified or eligible surgeon to be associated with a Board surgeon in city of 150,000 population. PW-21/1

General Practitioner or Internist for associate or separate practice in Birmingham. Modern office space and excellent hospital facilities. PW-26

Internist wanted, Board certified, Town of 10,000 population, Southwest Alabama. New 51-bed general hospital, I.C.U. Physicians: 5 GP's, Certified Surgeon and Radiologist. Within easy access, excellent fresh and salt water fishing, hunting including deer and turkey. Public and private schools. One hour drive from two metropolitan areas. PW-18

Wanted, internists, generalists, radiologist, orthopedist, general surgeons, town of 15,000 population in county of 45,000 population in southeast Alabama. Attractive for a group setup. High income area and marked scarcity of physicians. Excellent schools and recreational facilities. Newly expanded hospital. PW-17

Wanted: Immediately. Pediatrician to replace recently deceased partner in northeast Alabama. Enter busy practice in a predominantly GP area. Enjoy rural, quiet living with nearby scenic and recreational facilities. Salary, practice, everything negotiable. PW-19

Wanted: General Practitioner or Internist to join active 4-M. D. professional association—3-GP's, 1 Board Surgeon. Modern offices, accredited 75 bed hospital. Beautiful town of 10,000 with excellent churches, schools (public and private). Salary for 3-6 months then arrangement for full partnership. PW-22

General Practitioners—

For town of 2,000 population located in trade area of 15,000 population in northeast Alabama. Nearest metropolitan centers 30 miles distance. Industrial area. Clinic and some office equipment available. Several churches, schools, and civic clubs. PW-23

Opportunity for GP to join well established four-man partnership; three general practitioners and one board certified surgeon. Practice located in city of 8,000 population, trade area of 60,000, north-central Alabama. Modern new partnership—

(Continued on Page 233)

DBI® phenformin HCl
Tablets of 25 mg.
DBI-TD® phenformin HCl
Timed-Disintegration
Capsules of 50 and 100 mg.

Indications: Stable adult diabetes mellitus; sulfonylurea failures, primary and secondary; adjunct to insulin therapy of unstable diabetes mellitus.

Contraindications: Diabetes mellitus that can be regulated by diet alone; juvenile diabetes mellitus that is uncomplicated and well regulated on insulin; acute complications of diabetes mellitus (metabolic acidosis, coma, infection, gangrene); during or immediately after surgery where insulin is indispensable; severe hepatic disease; renal disease with uremia; cardiovascular collapse (shock); after disease states associated with

hypoxemia.

Warnings: Use during pregnancy is to be avoided.

Precautions: 1. *Starvation Ketosis:* This must be differentiated from "insulin lack" ketosis and is characterized by ketonuria which, in spite of relatively normal blood and urine sugar, may result from excessive phenformin therapy, excessive insulin reduction, or insufficient carbohydrate intake. Adjust insulin dosage, lower phenformin dosage, or supply carbohydrates to alleviate this state. **Do not give insulin without first checking blood and urine sugar.**

2. *Lactic Acidosis:* This drug is not recommended

Why go to the islets

Let's say you've decided that diet alone won't work in your adult-onset, nonketotic diabetic.

You're considering oral therapy for a new patient. DBI-TD or a sulfonylurea. Which?

Both lower blood sugar. But here's why DBI-TD, which is not a sulfonylurea, may be important to the dieting diabetic.

- Sulfonylureas promote release of insulin.
- Insulin is lipogenic and helps transport glucose into adipose tissue.
- Overweight patients frequently have normal or high levels of endogenous insulin.
- DBI-TD lowers blood sugar without stimulating insulin secretion from the pancreas.

Usual dosage: one 50-mg. capsule with breakfast may be effective, or a second capsule may be given with the evening meal.

DBI-TD® Geigy
phenformin HCl

**lowers blood sugar
without raising blood insulin**

presence of azotemia or in any clinical condition that predisposes to sustained hypotension that could lead to lactic acidosis. To differentiate lactic acidosis from ketoacidosis, periodic determinations of ketones in the blood should be made in diabetics previously treated on phenformin, or phenformin and insulin, who have become unstable. If electrolyte imbalance is suspected, periodic determinations should also be made of electrolytes, pH, and the glucose-pyruvate ratio. The drug should be withdrawn and insulin, when required, and other corrective measures instituted immediately upon

the appearance of any metabolic acidosis.

3. **Hypoglycemia:** Although hypoglycemic reactions are rare when phenformin is used alone, every precaution should be observed during the dosage adjustment period particularly when insulin or a sulfonylurea has been given in combination with phenformin.

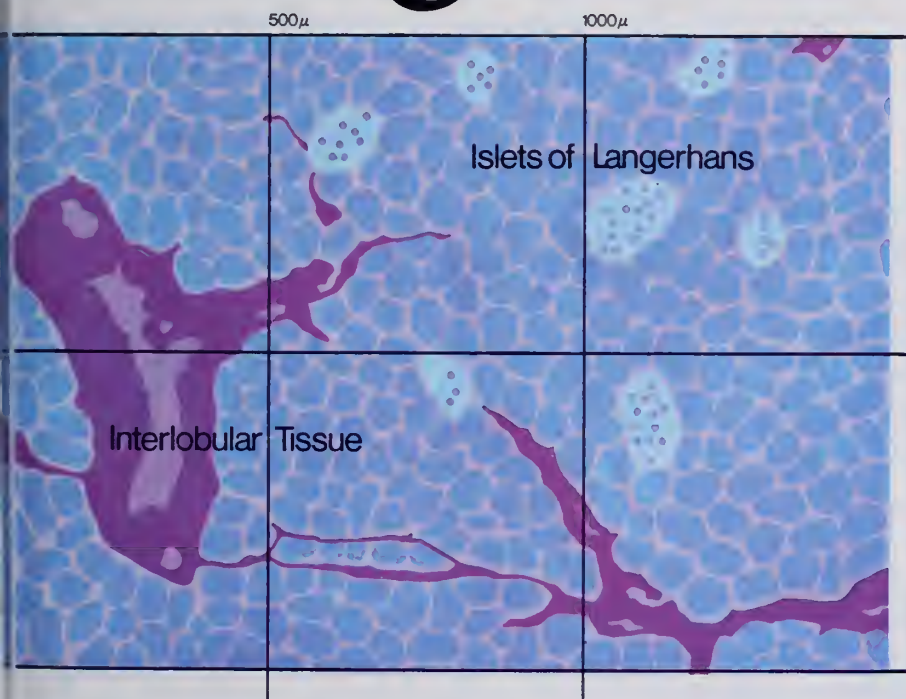
Adverse Reactions: Principally gastrointestinal; unpleasant metallic taste, continuing to anorexia, nausea and, less frequently, vomiting and diarrhea. Reduce dosage at first sign of these symptoms. In case of vomiting, the drug should be immediately withdrawn. Although rare, urticaria

has been reported, as have gastrointestinal symptoms such as anorexia, nausea and vomiting following excessive alcohol intake. (B) 98-146-103-D (6/72)

For complete details, including dosage, please see full prescribing information.

GEIGY Pharmaceuticals
Division of CIBA-GEIGY Corporation
Ardsley, New York 10502

of Langerhans?



Before using DBI-TD or any oral hypoglycemic, please read the prescribing information concerning dosage, warnings, contraindications, precautions and adverse reactions.

Literary Hemorrhoids

Mrs. S.R., 47, high school English teacher. A history of anorectal pain and burning of several years' duration. On and off weight reducing diets, the insufficient bulk of which has aggravated a chronic constipation problem. Subsequent straining at stool has precipitated an acute episode of internal-external hemorrhoids.



a typical
proctological
patient

to help
relieve the pain,
itching,
burning associate
with this and
similar anorectal
conditions

prescribe

Anusol[®]
HC hemorrhoidal
suppositories
with hydrocortisone
acetate

Each suppository contains hydrocortisone acetate 10 mg, bismuth subgallate 2.25%, bismuth resorcin compound 1.75%, benzyl benzoate 1.2%, Peruvian balsam 1.8%, zinc oxide 11.0%, and boric acid 5.0%, plus the following inactive ingredients: bismuth subiodide, calcium phosphate, and coloring in a bland hydrogenated vegetable oil base.

Precaution Prolonged or excessive use of Anusol-HC might produce systemic corticosteroid effects. Symptomatic relief should not delay definitive diagnosis or treatment.

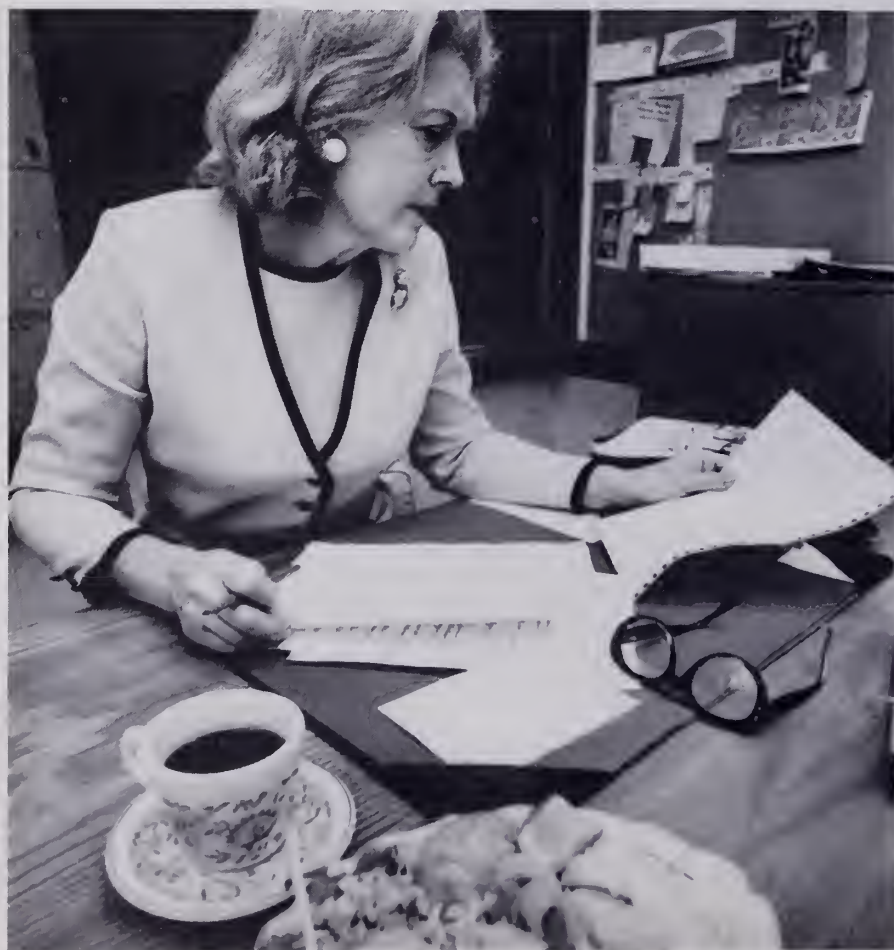
Dosage and Administration Anusol-HC. One suppository in the morning and one at bedtime for 3 to 6 days or until the inflammation subsides. Regular Anusol. One suppository in the morning, one at bedtime, and one immediately following each evacuation.

And for long-term patient comfort...recommend **Anusol[®]** hemorrhoidal suppositories.

Each suppository contains the ingredients of Anusol-HC without the hydrocortisone.



Warner-Chilcot
Division, Warner-Lambert Company
Morris Plains, New Jersey 07955
ANGP-23 Rev



PLACEMENT SERVICE

(Continued from Page 229)

owned offices adjacent to modern 125-bed fully accredited hospital. Salaried first year with possible partnership status at end of first year.

PW-27

For community of 1,500 population located in south Alabama near city of 12,000 population. Hospitals located within 25 miles. Office space and equipment available. Farming, cattle and textile industries in the area. Several churches and school. Civic clubs and golf courses.

PW-1-1

Opportunity for two general practioners to as-

sist two established GP's in a progressive comprehensive medical program in rural county of 12,500 population. Modern new office building, fully equipped, located in county seat, 20 miles west of Montgomery, Alabama. Excellent salary. Several churches, school, and recreation areas.

PW-1/8

Opportunity in town of 3,000 population located in trade area of 12,000 population in south Alabama. 23-bed hospital. Office space available. Numerous churches and schools. Recreational areas nearby.

PW-1/11

Medicare Committee Solicits Comments

The six physicians composing the Medicare Medical Review Committee are appointed by your State Board of Censors. Their primary duty is to serve on the Blue Shield Executive Committee. However, on a monthly basis the physicians sit as a medical review committee and review problem cases referred by consulting physicians doing daily reviews of Medicare claims. Your committee also issues general and special medical guidelines to be used from day to day by consulting physicians.

We physicians who serve on this board are aware of some of the problems and frustrations that physicians face in serving the Medicare beneficiaries. Therefore, we believe that Alabama physicians should know the basic principles under which the carrier operates in paying *physicians', hospitals' and nursing homes' claims*. *The cardinal principle is that no claim is denied (in whole or in part) until it has been reviewed by one or more qualified physicians, with the full Executive Committee acting as an appeal body.* As a corollary to this principle, physicians and hospitals who do not agree with the decision of the consultants are invited to bring such disagreements to the full committee. For example, if part of a hospital or a physician bill is denied, the hospital or the physician can request review and, if necessary, may appeal personally.

One frustration we face as practitioners is that we cannot identify with the specific physician who does daily medical review.

The Alabama carrier uses physicians in private practice, rather than using a full-time, salaried physician. We agree this produces better medical review. But it has the limitation of non-identity. For the daily consultants to engage in direct conversation with the practicing physicians of the state would consume a great deal of their time, and would also make it difficult to retain well-qualified consultants. The undersigned physicians, as part of their responsibilities, serve as the *identifiable* physicians in appealed cases.

In our effort to strengthen and preserve the voluntary practice of medicine, we invite physicians to make any reasonable suggestions to us, and we earnestly solicit your cooperation and trust. Your suggestions and criticisms should be forwarded to the undersigned chairman at the address of the carrier—930 South 20th Street, Birmingham, Alabama 35298. Your communications will receive the personal attention of the Medical Review Committee.

James A. Davis, Jr., M. D.
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Internist or General Practitioner required immediately to associate with outpatient group at Birmingham, Alabama, VA Hospital, a Dean's Committee hospital. According to abilities may be involved in developing new concepts of care for ambulatory care patients, sub-physician performance of routine examinations, and a new program of screening and treatment for hypertensive patients. Possibility for interaction with academic service. Salary up to \$31,554, commensurate with training and experience, plus full Civil Service benefits. Contact or write:

**Eugene C. Clark, M. D.
Chief, Outpatient Service
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An Equal Opportunity Employer.

Before deciding to make Valium (diazepam) part of your treatment plan, check on whether or not the patient is presently taking drugs and, if so, what his response has been. Along with the medical and social history, this information can help you determine initial dosage, the possibility of side effects and the ultimate prospects of success or failure.

While Valium can be a most helpful adjunct to your counseling, it should be prescribed only as long as excessive psychic tension persists and should be discontinued when you decide it has accomplished its therapeutic task. In general, when dosage guidelines are followed, Valium is well tolerated (see Dosage). For convenience it is available in 2-mg, 5-mg and 10-mg tablets.

Drowsiness, fatigue and ataxia have been the most commonly reported side effects.

Until response is determined, patients receiving Valium should be cautioned against engaging in hazardous occupations requiring complete mental alertness, such as driving or operating machinery.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

Dosage: Individualize for maximum beneficial effect.

Adults: Tension, anxiety and psychoneurotic states, 2 to 10 mg b.i.d. to q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; adjunctively in skeletal muscle spasm, 2 to 10 mg t.i.d. or q.i.d.; adjunctively in convulsive disorders, 2 to 10 mg b.i.d. to q.i.d. **Geriatric or debilitated patients:** 2 to 2½ mg, 1 or 2 times daily initially, increasing as needed and tolerated. (See Precautions.) **Children:** 1 to 2½ mg t.i.d. or q.i.d. initially, increasing as needed and tolerated (not for use under 6 months).

Supplied: Valium® (diazepam) Tablets, 2 mg, 5 mg and 10 mg; bottles of 100 and 500. All strengths also available in Tel-E-Dose® packages of 1000.



Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110

Valium® (diazepam)

To help you manage excessive psychic tension

THE JOURNAL

of the

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rheumatoid arthritic blowup...

Tandearil[®] Geigy
oxyphenbutazone NF

tablets of 100 mg.

Important Note: This drug is not a simple analgesic. Do not administer casually. Carefully evaluate patients before starting treatment and keep them under close supervision. Obtain a detailed history, and complete physical and laboratory examination (complete hemogram, urinalysis, etc.) before prescribing and at frequent intervals thereafter. Carefully select patients, avoiding those responsive to routine measures, contraindicated patients or those who cannot be observed frequently. Warn patients not to exceed recommended dosage. Short-term relief of severe symptoms with the smallest possible dosage is the goal of therapy. Dosage should be taken with meals or a full glass of milk. A one-week trial period is adequate. Discontinue in the absence of a favorable response. Restrict treatment periods to one week in patients over sixty. **Indications:** Acute gouty arthritis, rheumatoid arthritis, rheumatoid spondylitis.

Contraindications: Children 14 years or less; senile patients; history or symptoms of G.I. inflammation or ulceration including severe, recurrent or persistent dyspepsia; history or presence of drug allergy; blood dyscrasias; renal, hepatic or cardiac dysfunction; hypertension; thyroid disease; systemic edema; stomatitis and salivary gland enlargement due to the drug; polymyalgia rheumatica and temporal arteritis; patients receiving other potent chemotherapeutic agents, or long-term anticoagulant therapy. **Warnings:** Age, weight, dosage, duration of therapy, existence of concomitant diseases, and concurrent potent chemotherapy affect incidence of toxic reactions. Carefully instruct and observe the individual patient, especially the aging (forty years and over) who have increased susceptibility to the toxicity of the drug. Use lowest effective dosage. Weigh initially unpredictable benefits against potential risk of severe, even fatal, reactions. The disease condition itself is

unaltered by the drug. Use with caution in first trimester of pregnancy and in nursing mothers. Drug may appear in cord blood and breast milk. Serious, even fatal, blood dyscrasias, including aplastic anemia, may occur suddenly despite regular hemograms, and may become manifest days or weeks after cessation of drug. Any significant change in total white count, relative decrease in granulocytes, appearance of immature forms, or fall in hematocrit should signal immediate cessation of therapy and complete hematologic investigation. Unexplained bleeding involving CNS, adrenals, and G.I. tract has occurred. The drug may potentiate action of insulin, sulfonylurea, and sulfonamide-type agents. Carefully observe patients taking these agents. Nontoxic and toxic goiters and myxedema have been reported (the drug reduces iodine uptake by the thyroid). Blurred vision can be a significant toxic symptom worthy of a complete ophthalmological examination. Swelling of ankles or face in patients under sixty may be prevented by reducing dosage. If edema occurs in patients over sixty, discontinue drug.

Precautions: The following should be accomplished at regular intervals: Careful detailed history for disease being treated and detection of earliest signs of adverse reactions; complete physical examination including check of patient's weight; complete weekly (especially for the aging) or an every two week blood check; pertinent laboratory studies. Caution patients about participating in activity requiring alertness and coordination, as driving a car, etc. Cases of leukemia have been reported in patients with a history of short- and long-term therapy. The majority of these patients were over forty. Remember that arthritic-type pains can be the presenting symptom of leukemia.

Adverse Reactions: This is a potent drug; its misuse can lead to serious results. Review detailed information before beginning therapy. Ulcerative esophagitis, acute and reactivated gastric and duodenal ulcer with perforation and hemorrhage, ulceration and perforation of large bowel, occult G.I. bleeding with anemia, gastritis, epigastric pain, hematemesis, dyspepsia, nausea, vomiting and diarrhea, abdominal

distention, agranulocytosis, aplastic anemia, hemolytic anemia, anemia due to blood loss including occult G.I. bleeding, thrombocytopenia, pancytopenia, leukemia, leukopenia, bone marrow depression, sodium and chloride retention, water retention and edema, plasma dilution, respiratory alkalosis, metabolic acidosis, fatal and nonfatal hepatitis (cholestasis may or may not be prominent), petechiae, purpura without thrombocytopenia, toxic pruritus, erythema nodosum, erythema multiforme, Stevens-Johnson syndrome, Lyell's syndrome (toxic necrotizing epidermolysis), exfoliative dermatitis, serum sickness, hypersensitivity angitis (polyarteritis), anaphylactic shock, urticaria, arthralgia, fever, rashes (all allergic reactions require prompt and permanent withdrawal of the drug), proteinuria, hematuria, oliguria, anuria, renal failure with azotemia, glomerulonephritis, acute tubular necrosis, nephrotic syndrome, bilateral renal cortical necrosis, renal stones, ureteral obstruction with uric acid crystals due to uricosuric action of drug, impaired renal function, cardiac decompensation, hypertension, pericarditis, diffuse interstitial myocarditis with muscle necrosis, perivascular granulomata, aggravation of temporal arteritis in patients with polymyalgia rheumatica, optic neuritis, blurred vision, retinal hemorrhage, toxic amblyopia, retinal detachment, hearing loss, hyperglycemia, thyroid hyperplasia, toxic goiter association of hyperthyroidism and hypothyroidism (causal relationship not established), agitation, confusional states, lethargy; CNS reactions associated with overdosage, including convulsions, euphoria, psychosis, depression, headaches, hallucinations, giddiness, vertigo, coma, hyperventilation, insomnia; ulcerative stomatitis, salivary gland enlargement. (B) 98-146-800-E

For complete details, including dosage, please see full prescribing information.

GEIGY Pharmaceuticals
Division of CIBA-GEIGY Corporation
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a new outlook in chronic pain

of moderate to severe intensity

Though Talwin® Tablets, brand of pentazocine (as hydrochloride), can be compared to codeine in analgesic efficacy, Talwin is not subject to narcotic controls. Patients receiving Talwin Tablets for prolonged periods face fewer of the consequences you've come to expect with meperidine or codeine. And that, in the long run, can mean a better outlook for your chronic-pain patient.

Talwin Tablets are:

- **Comparable to codeine in analgesic efficacy:** one 50 mg. Talwin Tablet appears equivalent in analgesic effect to 60 mg. (1 gr.) of codeine. Onset of significant analgesia usually occurs within 15 to 30 minutes. Analgesia is usually maintained for 3 hours or longer.
- **Tolerance not a problem:** tolerance to the analgesic effect of Talwin Tablets has not been reported, and no significant changes in clinical laboratory parameters attributable to the drug have been reported.
- **Dependence rarely a problem:** during three years of wide clinical use, only a few cases of dependence have been reported. In prescribing Talwin for chronic use, the physician should take precautions to avoid increases in dose by the patient and to prevent the use of the drug in anticipation of pain rather than for the relief of pain.
- **Not subject to narcotic controls:** convenient to prescribe — day or night — even by phone.
- **Generally well tolerated by most patients:** infrequently cause decrease in blood pressure or tachycardia; rarely cause respiratory depression or urinary retention; seldom cause diarrhea or constipation. If dizziness, light-headedness, nausea or vomiting are encountered, these effects tend to be self-limiting and to decrease after the first few doses. (See last page of this advertisement for a complete discussion of adverse reactions and a brief discussion of other Prescribing Information.)

50 mg. Tablets

Talwin®
brand of
pentazocine

(as hydrochloride)

the long-range analgesic

a new outlook in chronic pain

of moderate to severe intensity



Contraindications: Talwin, brand of pentazocine (as hydrochloride), should not be administered to patients who are hypersensitive to it.

Warnings: *Head Injury and Increased Intracranial Pressure.* The respiratory depressant effects of Talwin and its potential for elevating cerebrospinal fluid pressure may be markedly exaggerated in the presence of head injury, other intracranial lesions, or a pre-existing increase in intracranial pressure. Furthermore, Talwin can produce effects which may obscure the clinical course of patients with head injuries. In such patients, Talwin must be used with extreme caution and only if its use is deemed essential.

Usage in Pregnancy. Safe use of Talwin during pregnancy (other than labor) has not been established. Animal reproduction studies have not demonstrated teratogenic or embryotoxic effects. However, Talwin should be administered to pregnant patients (other than labor) only when, in the judgment of the physician, the potential benefits outweigh the possible hazards. Patients receiving Talwin during labor have experienced no adverse effects other than those that occur with commonly used analgesics. Talwin should be used with caution in women delivering premature infants.

Drug Dependence. There have been instances of psychological and physical dependence on parenteral Talwin in patients with a history of drug abuse and, rarely, in patients without such a history. Abrupt discontinuance following the extended use of parenteral Talwin has resulted in withdrawal symptoms. There have been a few reports of dependence and of withdrawal symptoms with orally administered Talwin. Patients with a history of drug dependence should be under close supervision while receiving Talwin orally.

In prescribing Talwin for chronic use, the physician should take precautions to avoid increases in dose by the patient and to prevent the use of the drug in anticipation of pain rather than for the relief of pain.

Acute CNS Manifestations. Patients receiving therapeutic doses of Talwin have experienced, in rare instances, hallucinations (usually visual), disorientation, and confusion which have cleared spontaneously within a period of hours. The mechanism of this reaction is not known. Such patients should be very closely observed and vital signs checked. If the drug is reinstituted it should be done with caution since the acute CNS manifestations may recur.

Usage in Children. Because clinical experience in children under 12 years of age is limited, administration of Talwin in this age group is not recommended.

Ambulatory Patients. Since sedation, dizziness, and occasional euphoria have been noted, ambulatory patients should be warned not to operate machinery, drive cars, or unnecessarily expose themselves to hazards.

Precautions: *Certain Respiratory Conditions.* Although respiratory depression has rarely been reported after oral administration of Talwin, the drug should be administered with caution to patients with respiratory depression from any cause, severe bronchial asthma and other obstructive respiratory conditions, or cyanosis.

Impaired Renal or Hepatic Function. Decreased metabolism of the drug by the liver in extensive liver disease may predispose to accentuation of side effects. Although laboratory tests have not indicated that Talwin causes or increases renal or hepatic impairment, the drug should be administered with caution to patients with such impairment.

Myocardial Infarction. As with all drugs, Talwin should be used with caution in patients with myocardial infarction who have nausea or vomiting.

Biliary Surgery. Until further experience is gained with the effects

of Talwin on the sphincter of Oddi, the drug should be used with caution in patients about to undergo surgery of the biliary tract. *Patients Receiving Narcotics.* Talwin is a mild narcotic antagonist. Some patients previously receiving narcotics have experienced mild withdrawal symptoms after receiving Talwin.

CNS Effect. Caution should be used when Talwin is administered to patients prone to seizures; seizures have occurred in a few such patients in association with the use of Talwin although no cause and effect relationship has been established.

Adverse Reactions: Reactions reported after oral administration of Talwin include *gastrointestinal:* nausea, vomiting; infrequently constipation; and rarely abdominal distress, anorexia, diarrhea. *CNS effects:* dizziness, lightheadedness, sedation, euphoria, headache; infrequently weakness, disturbed dreams, insomnia, syncope, visual blurring and focusing difficulty, hallucinations (see *Acute CNS Manifestations* under WARNINGS); and rarely tremor, irritability, excitement, tinnitus. *Autonomic:* sweating; infrequently flushing; and rarely chills. *Allergic:* infrequently rash; and rarely urticaria, edema of the face. *Cardiovascular:* infrequently decrease in blood pressure, tachycardia. *Other:* rarely respiratory depression, urinary retention.

Dosage and Administration: *Adults.* The usual initial adult dose is 1 tablet (50 mg.) every three or four hours. This may be increased to 2 tablets (100 mg.) when needed. Total daily dosage should not exceed 600 mg.

When antiinflammatory or antipyretic effects are desired in addition to analgesia, aspirin can be administered concomitantly with Talwin.

Children Under 12 Years of Age. Since clinical experience in children under 12 years of age is limited, administration of Talwin in this age group is not recommended.

Duration of Therapy. Patients with chronic pain who have received Talwin orally for prolonged periods have not experienced withdrawal symptoms even when administration was abruptly discontinued (see WARNINGS). No tolerance to the analgesic effect has been observed. Laboratory tests of blood and urine and of liver and kidney function have revealed no significant abnormalities after prolonged administration of Talwin.

Overdosage: *Manifestations.* Clinical experience with Talwin overdosage has been insufficient to define the signs of this condition.

Treatment. Oxygen, intravenous fluids, vasopressors, and other supportive measures should be employed as indicated. Assisted or controlled ventilation should also be considered. Although nalor phine and levallorphan are not effective antidotes for respirator depression due to overdosage or unusual sensitivity to Talwin, parenteral naloxone (Narcan®, available through Endo Laboratories) is a specific and effective antagonist. If naloxone is not available, parenteral administration of the analeptic, methylphenidate (Ritalin®) may be of value if respiratory depression occurs.

Talwin is not subject to narcotic controls.

How Supplied: Tablets, peach color, scored. Each tablet contain Talwin (brand of pentazocine) as hydrochloride equivalent to 50 mg base. Bottles of 100.

Winthrop Winthrop Laboratories, New York, N. Y. 10016 (1583)

50 mg. Tablets

Talwin®
brand of
pentazocine (as hydrochloride)

the long-range analgesic

Alabama's first Medical Practice Act, adopted in 1819, spoke out against those practicing medicine who "shall bleed, apply a blister of Spanish flies, administer calomel, opium or laudanum."

BLUE CROSS-BLUE SHIELD OF ALABAMA



President's Page

Change For The Sake Of Change

Consider with me for a moment these thoughts.

Perhaps I would like to promote a crusade or reform of our State Judicial system. Everyone I have talked with is dissatisfied with the action of our courts. They are dissatisfied with the delay in getting criminals to trial, the uncertainty of punishment and of the guilty being turned loose because of court procedures and legal technicalities. Many of the lawyers with whom I have talked are dissatisfied with our present system and feel there is need for a change.

My proposal for reform is to give better representation—consumer representation to our nine-member State Supreme Court. Now, I admit that I find no fault with our State Supreme Court Judges. They are dedicated and conscientious men. But I feel there is need for change, for better representation from the public.

On our nine-member State Supreme Court I propose to appoint one member of our State Highway Patrol, one member of our State Association of Municipal police, one member of our State Sheriff Association, and one member from the public at large, thereby creating a State Supreme Court to consist of five professionals or lawyers and four representatives from the public.

The above thoughts, of course, would all



DR. PHILLIPPI

be dead wrong. No one should be on our State Supreme Court except professionals—Lawyers. Likewise, no one should be on our State Board of Health except professionals—physicians.

A handwritten signature in dark ink, appearing to read "Frank M. Phillippi, Jr." with a stylized, cursive script.

Frank M. Phillippi, Jr., M. D.

The most valuable result of all education is to make you do the thing you have to do, when it ought to be done, whether you like it or not. It is the first lesson that ought to be learned. And however early a man's training begins, it is probably the last lesson he learns thoroughly.—Thomas Huxley

* * *



"For generations my family has insisted on Donnagel[®]-PG," says active young matron Mrs. T. Farnsworth Lipp (of the Upper Lipps), shown here with her charming son. "All the benefits of paregoric—without the unpleasant taste, don't you know? And Junior thinks Donnagel-PG tastes so much like bananas that I never worry about a slip between spoon and Lipp."

A Matter of Taste

With or without a silver spoon, a most tasteful solution in treating acute, non-specific spasms: all the benefits of paregoric, without the unpleasant taste. Donnagel[®]-PG treats accompanying cramping, tenesmus, and nausea as well as the diarrhea itself. Instead of unpleasant-tasting paregoric, it contains the therapeutic equivalent, powdered opium, to promote the production of formed stools and lessen the urge. And it provides the percent-detoxicant effects of kaolin and pectin, plus the antispasmodic benefits of atropine alkaloids. And a good banana flavor to baby any taste.

Donnagel[®]-PG

Donnagel with paregoric equivalent

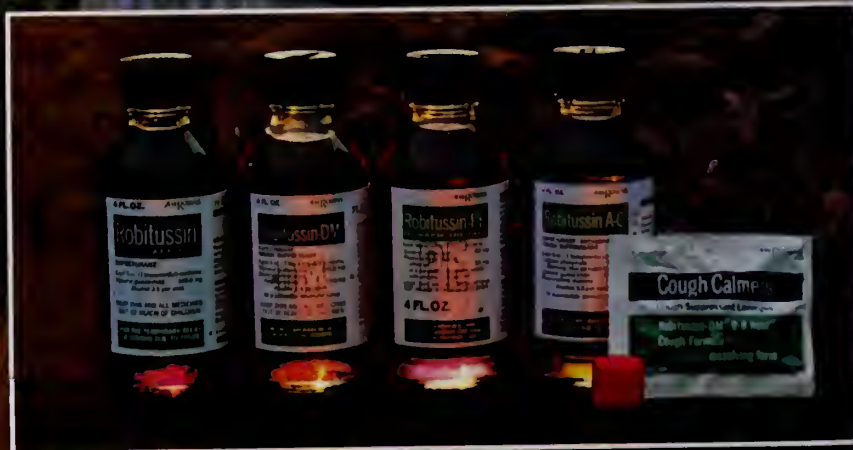
Available on oral prescription or without prescription under limited circumstances as modified by applicable state law.

Each 30 cc. contains: Kaolin, 6.0 g.; Pectin, 142.8 mg.; Hyoscyamine sulfate, 0.1037 mg.; Atropine sulfate, 0.0194 mg.; Hyoscine hydrobromide, 0.0065 mg.; Powdered opium, USP, 24.0 mg. (equivalent to paregoric 6 ml.) (Warning: may be habit forming); Sodium benzoate (preservative), 0.3 g.; Alcohol, 5%. A.H. Robins Company, Richmond, Virginia 23220

A-H-ROBINS



coughs are back....



clear the tract!

The coughing season is here again. Time to rely on the four Robitussins and Cough Calmers to help clear the lower respiratory tract. All contain glyceryl guaiacolate, the efficient expectorant that works systemically to help increase the output of lower respiratory tract fluid. The enhanced flow of less viscid secretions soothes the tracheobronchial mucosa, promotes ciliary action, and makes thick, inspissated mucus less viscid and easier to raise. Available on your prescription or recommendation.

For coughs of colds and "flu"

Robitussin®

Each 5 cc. contains:

Glyceryl guaiacolate 100.0 mg.
Alcohol, 3.5%

For unproductive allergic coughs

Robitussin A-C®

Each 5 cc. contains:

Glyceryl guaiacolate 100.0 mg.
Pheniramine maleate 7.5 mg.
Codeine phosphate 10.0 mg.
(warning: may be habit forming)
Alcohol, 3.5%

Non-narcotic for 6-8 hr. cough control

Robitussin-DM®

Each 5 cc. contains:

Glyceryl guaiacolate 100.0 mg.
Dextromethorphan
hydrobromide 15.0 mg.
Alcohol, 1.4%

Clears sinuses and nasal stuffiness as it relieves cough

Robitussin-PE®

Each 5 cc. contains:

Glyceryl guaiacolate 100.0 mg.
Phenylephrine
hydrochloride 10.0 mg.
Alcohol, 1.4%

Robitussin-DM in solid form for "coughs on the go"

Cough Calmers®

Each Cough Calmer contains:












Glyceryl guaiacolate 50.0 mg.
Dextromethorphan
hydrobromide 7.5 mg.

with the

ROBITUSSIN® LINE

Select the Robitussin® "Clear-Tract" Formulation That Treats Your Patient's Individual Coughing Needs:

All 5 Robitussins have an EXPECTORANT-DEMULCENT action. Keep this handy chart as a guide in selecting the formula that provides the *extra* benefits you want for your patient.

Robitussin® extra benefit chart	Cough Suppressant	Antihistamine	Long-Acting (6-8 hours)	Nasal, Sinus Decongestant	Non-Narcotic
ROBITUSSIN®					
ROBITUSSIN A-C®					
ROBITUSSIN-DM®					
ROBITUSSIN-PE®					
COUGH CALMERS®					

A. H. Robins Company,
Richmond, Virginia 23220

A-H-ROBINS



When you select this familiar antibiotic for IV infusion you have available a broad dosage range that hospitalized patients may need.

Intravenous Lincocin (lincomycin hydrochloride, Upjohn), with its 1.2 to 8 grams/day dosage range, covers many serious and even life-threatening infections. Lincocin is effective in infections due to susceptible strains of streptococci, pneumococci, and staphylococci. Lincocin IV therefore can be as useful in your hospitalized patients as its IM use has proved to be in your office patients. As with all antibiotics, *in vitro* susceptibility studies should be performed.

1.2 to 8 grams/day IV dosage range:

Most hospitalized patients with uncomplicated pneumonias respond satisfactorily to 1.2 to 1.8 grams/day of Lincocin IV. These doses may have to be increased for more serious infections.

In life-threatening situations as much as 8 grams/day has been administered intravenously to adults.

In usual IV doses, Lincocin (lincomycin hydrochloride, Upjohn) should be diluted in 250 ml or more of normal saline solution or 5% glucose in water. But when 4 grams or more per day is given, Lincocin should be diluted in not less than 500 ml of either solution, and the rate of administration should not exceed 100 ml/hour. Too rapid intravenous administration of doses exceeding 4 grams may result in hypotension or, in rare instances, cardiopulmonary arrest.

Effective gram-positive antibiotic:

Lincocin IV is effective in respiratory tract, skin and soft-tissue, and bone



infections caused by susceptible strains of pneumococci, streptococci, and staphylococci, including penicillin-resistant strains. Staphylococcal strains resistant to Lincocin (lincomycin hydrochloride, Upjohn) have been recovered. Before initiating therapy, culture and susceptibility studies should be performed. Lincocin has proved valuable in treating patients hypersensitive to penicillin or cephalosporins, since Lincocin does not share antigenicity with these compounds. However, hypersensitivity reactions have been reported, some of these in patients known to be sensitive to penicillin.

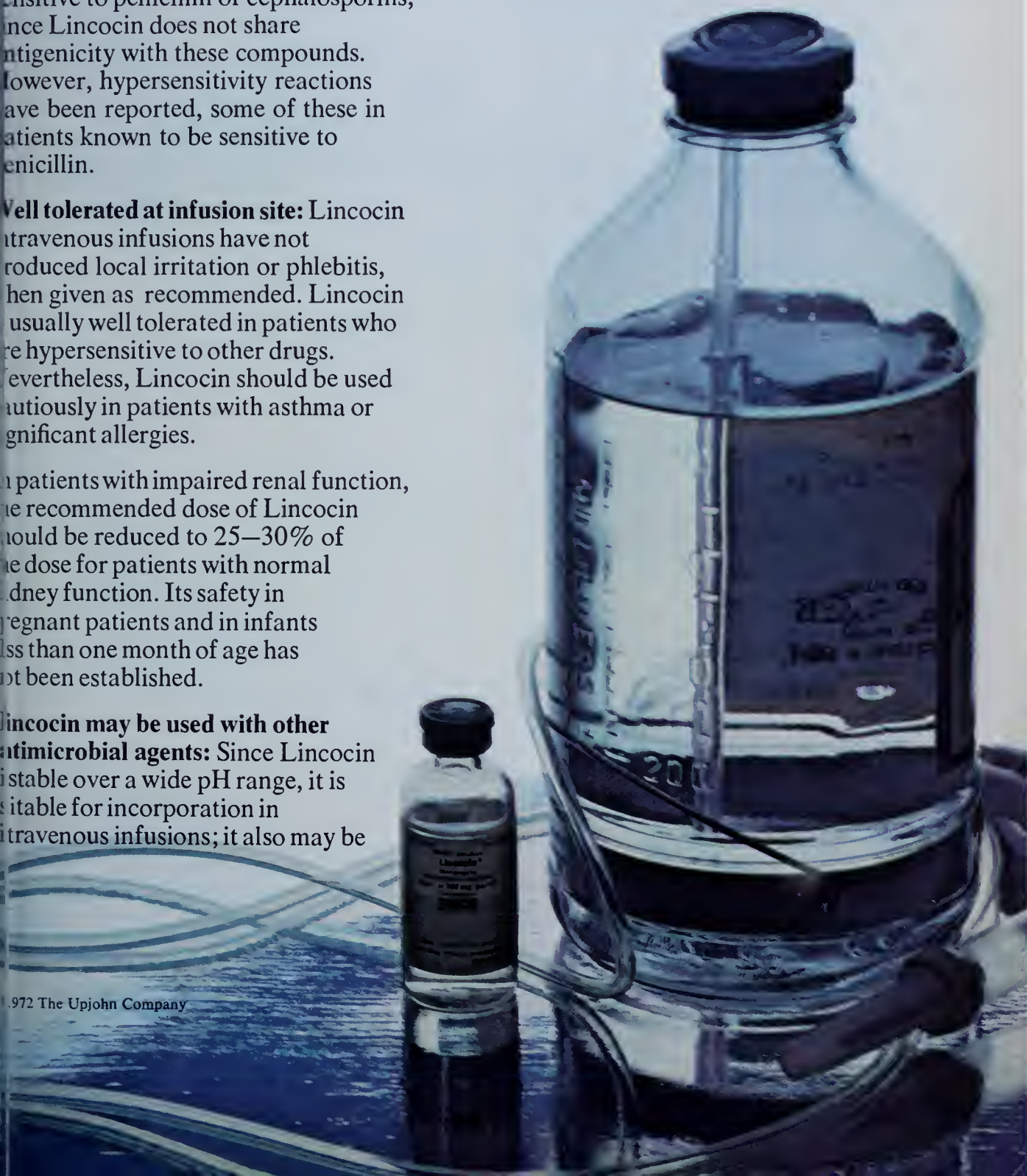
Well tolerated at infusion site: Lincocin intravenous infusions have not produced local irritation or phlebitis, when given as recommended. Lincocin is usually well tolerated in patients who are hypersensitive to other drugs. Nevertheless, Lincocin should be used cautiously in patients with asthma or significant allergies.

In patients with impaired renal function, the recommended dose of Lincocin should be reduced to 25–30% of the dose for patients with normal kidney function. Its safety in pregnant patients and in infants less than one month of age has not been established.

Lincocin may be used with other antimicrobial agents: Since Lincocin is stable over a wide pH range, it is suitable for incorporation in intravenous infusions; it also may be

administered concomitantly with other antimicrobial agents when indicated. However, Lincocin should not be used with erythromycin, as *in vitro* antagonism has been reported.

Lincocin[®]
Sterile Solution (300 mg per ml)
(lincomycin hydrochloride, Upjohn)
For further prescribing information, please see following page.





Sterile Solution (300 mg. per ml.)

Lincocin[®]

(lincomycin hydrochloride, Upjohn)

Up to 8 grams per day by IV infusion for
hospitalized patients with life-threatening infections.

Lincocin is effective in infections due to
susceptible strains of streptococci, pneumococci,
and staphylococci. As with all antibiotics,
in vitro susceptibility studies should be performed.

Each
preparation
contains:

Lincomycin
hydrochloride
monohydrate
equivalent to
lincomycin base

250 mg Pediatric Capsule 250 mg
500 mg Capsule 500 mg
*Sterile Solution per 1 ml 300 mg
Syrup per 5 ml 250 mg
*Contains also: Benzyl Alcohol 9 mg; and,
Water for Injection—q.s.

Lincocin (lincomycin hydrochloride) is indicated in infections due to susceptible strains of staphylococci, pneumococci, and streptococci. *In vitro* susceptibility studies should be performed. Cross resistance has not been demonstrated with penicillin, ampicillin, cephalosporins, chloramphenicol or the tetracyclines. Some cross resistance with erythromycin has been reported. Studies indicate that Lincocin does not share antigenicity with penicillin compounds.

CONTRAINDICATIONS: History of prior hypersensitivity to lincomycin or clindamycin. Not indicated in the treatment of viral or minor bacterial infections.

WARNINGS: CASES OF SEVERE AND PERSISTENT DIARRHEA HAVE BEEN REPORTED AND HAVE AT TIMES NECESSITATED DISCONTINUANCE OF THE DRUG. THIS DIARRHEA HAS BEEN OCCASIONALLY ASSOCIATED WITH BLOOD AND MUCUS IN THE STOOLS AND HAS AT TIMES RESULTED IN AN ACUTE COLITIS. THIS SIDE EFFECT USUALLY HAS BEEN ASSOCIATED WITH THE ORAL DOSAGE FORM BUT OCCASIONALLY HAS

BEEN REPORTED FOLLOWING PARENTERAL THERAPY. A careful inquiry should be made concerning previous sensitivities to drugs or other allergens. Safety for use in pregnancy has not been established and Lincocin (lincomycin hydrochloride) is not indicated in the newborn. Reduce dose 25 to 30% in patients with severe impairment of renal function.

PRECAUTIONS: Like any drug, Lincocin should be used with caution in patients having a history of asthma or significant allergies. Overgrowth of nonsusceptible organisms, particularly yeasts, may occur and require appropriate measures. Patients with pre-existing monilial infections requiring Lincocin therapy should be given concomitant antimonilial treatment. During prolonged Lincocin therapy, periodic liver function studies and blood counts should be performed. Not recommended (inadequate data) in patients with pre-existing liver disease unless special clinical circumstances indicate. Continue treatment of β -hemolytic streptococci infections for 10 days to diminish likelihood of rheumatic fever or glomerulonephritis.

ADVERSE REACTIONS: *Gastrointestinal*—Glossitis, stomatitis, nausea, vomiting. Persistent diarrhea, enterocolitis, and pruritus ani. *Hemopoietic*—Neutropenia, leukopenia, agranulocytosis, and thrombocytopenic purpura have been reported. *Hypersensitivity reactions*—Hypersensitivity reactions such as angioneurotic edema, serum sickness, and anaphylaxis have been reported, sometimes in patients sensitive to penicillin. If allergic reaction occurs, discontinue drug. Have epinephrine, corticosteroids, and antihista-

mines available for emergency treatment. *Skin and mucous membranes*—Skin rash, urticaria, vaginitis, and rare instances of folliculitis and vesiculobullous dermatitis have been reported. *Liver*—Although no direct relationship to liver dysfunction is established, jaundice and abnormal liver function tests (particularly serum transaminase) have been observed in a few instances. *Cardiovascular*—Instances of hypotension following parenteral administration have been reported particularly after too rapid IV administration. Rare instances of cardiopulmonary arrest have been reported after too rapid administration. If 4.0 grams or more administered IV, dilute in 500 ml of fluid and administer no faster than 100 ml per hour. *Special senses*—Tinnitus and vertigo have been reported occasionally. *Local reactions*—Excellent local tolerance demonstrated intramuscularly administered Lincocin (lincomycin hydrochloride). Reports of following injection have been infrequent. Intravenous administration of Lincocin 250 to 500 ml of 5% glucose in distilled water or normal saline has produced local irritation or phlebitis.

HOW SUPPLIED: 250 mg and 500 mg Capsules—bottles of 24 and 100. Sterile Solution, 300 mg per ml—2 and 10 ml and 2 ml syringe. Syrup, 250 mg per 5 ml—60 ml and pint bottles.

For additional product information, consult the package insert or see your Upjohn representative.

MED B-6-S (KZL-7) JA71-

The Upjohn Company
Kalamazoo, Michigan 49001

Upjohn

The Woman's Auxiliary

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AUXILIARY PLEDGE

"I pledge my loyalty and devotion to the Woman's Auxiliary to the American Medical Association. I will support its activities, protect its reputation and ever sustain its high ideals."

Togetherness

A Health Manpower Project can be an excellent way for physicians and their wives to work together in recruiting the best people in our State for jobs in the health industry. This is a people-to-people project that can involve a few people or it can get all your members active. If you haven't tried a cooperative program recently, this might be the very thing to give some vitality to both groups. It can be a rewarding experience for the doctor, his wife, the allied health professional, and the student.

The youth of today are searching for work which will be meaningful to others. No greater opportunity exists than in the health field. The medical profession needs to let young people know they are needed, and then follow through by helping them choose the right career; directing them to the proper places for training.

There is a great interest in health careers in Alabama as shown by the 800 high school students who attended the Health Careers Congress last February in Montgomery. This conference was a good start, but we should not stop there. Each county needs to have some recruiting activities of their own going on. Some Auxiliaries, with the help of their husbands, have been doing a good job by sponsoring health career clubs, science clubs, and health fairs. We need to be doing more.

With another school year beginning, it is a good time for using new ideas in planning for the year. How about a *Mini-Health Careers-Workshop*? It could be like a smorgasbord . . . a one-day session for all high school students interested in health job op-



MRS. HANSBERRY

portunities. Each workshop could offer an "in depth presentation" of three to six allied health programs. By getting the cooperation of the high school principals, counselors and science teachers, the workshop could be held on Saturday in one of the high schools.

A mini-workshop could be a showcase for all members of the health team. They could work together to have a program presented that would inform the students of rewarding jobs at all educational levels. Small discussion groups could vary in size from ten to 40 people in each group. The professional could exhibit (or demonstrate) the tools of his specialty, giving an impressive personal touch. A project like this would provide an opportunity for all allied health

professionals and their Auxiliaries to work together toward a common goal. This type of togetherness could give the medical profession the public image it needs and deserves.

A. Rae Hansberry

A. Rae Hansberry
President

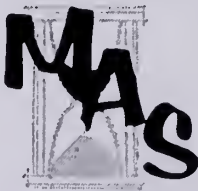
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Consultation regarding Medical Accounts is available in your area. Evaluation of your need is available. A knowledgeable medical collection agency proceeds with discretion and tact in keeping with the dignity of the medical community.

Medical Account Service is presently providing services to over a hundred doctors and hospitals in the Southeast and can assure you of many "paid in full" results.

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The right school makes all the difference

At WOODWARD ACADEMY your child can find meaningful direction in a challenging learning atmosphere.

We offer:

A co-educational, college prep boarding school program for boys and girls, Grades 7-12.

A challenging program that stimulates excellence. 100% of students go to college; 14 National Merit Semi-Finalists, 6 commended.

The unique experience of the boarding school where the student cultivates independence, individual responsibility, new and interesting friends, maturity, and lots of fun!

Enrichment and excellence—including advanced placement studies, computer training, closed circuit TV system, planetarium, skilled faculty committed to help the student, and modern facilities.

Flexibility—with a Reading Disability Program for students handicapped with Dyslexia but who have college potential.

Complete athletic program: soccer, tennis, track, basketball, gymnastics. Woodward is the 1970-71 State Champion in Football, Wrestling, and Swimming.

Woodward Academy

For further information write or call:
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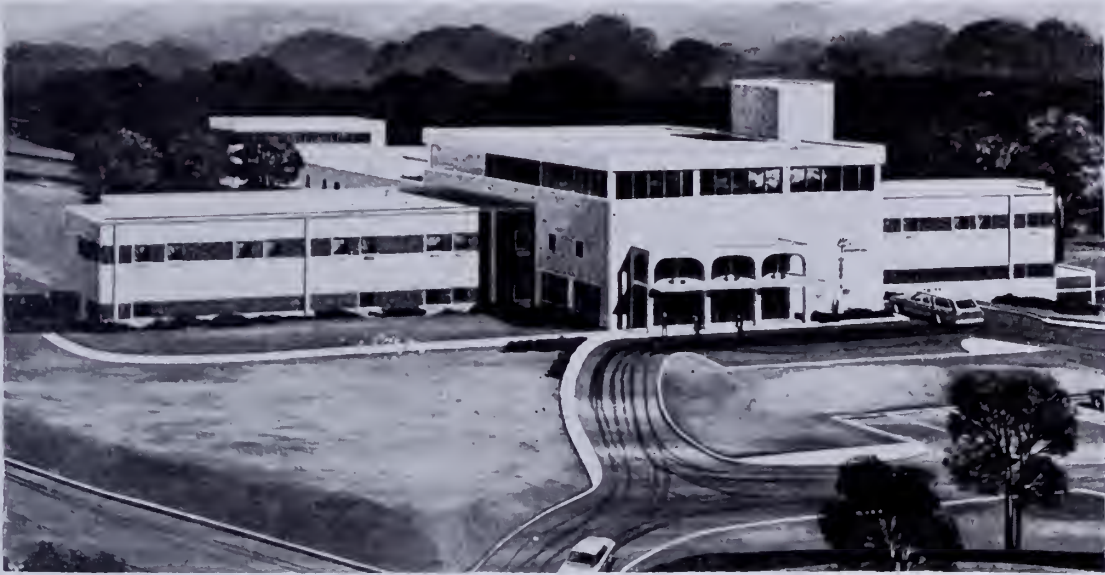


Federal Grants Announced

Dr. Frank J. Groschelle announced today that \$24,599,300 in Federal grants have been awarded to 92 colleges and institutions in Region IV's eight states.

Priorities include supporting institutions serving large numbers of low-income and minority students. Nationwide, for example, 95 predominantly black institutions received grants totaling nearly \$31 million; institutions enrolling large numbers of Spanish-speaking Americans received more than \$3.6 million; and nearly \$2 million was awarded to institutions enrolling large numbers of American Indian students.

Alabama received 14 Grants, a total of \$4,125,587.



Hill Crest HOSPITAL

For Intensive Treatment of Psychiatric Disorders

This 113-bed non-governmental psychiatric hospital provides modern facilities for diagnosis and treatment of patients with all degrees of illness, including those who show severely disturbed behavior. Alcoholic and drug abuse patients are also accepted.

In addition to care by psychiatrists and by consultants in all medical specialties, the treatment program includes occupational, recreational, and physical therapy, social services, and tutoring. Emphasis is on short-term, intensive treatment of voluntary patients.

Hill Crest is a member of: American Hospital Association, National Association of Private Psychiatric Hospital, Alabama Hospital Association, Birmingham Regional Hospital Council.

Accredited by Joint Commission on Accreditation of Hospitals. Medicare Approved. Blue Cross Participating Hospital.

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ADMINISTRATOR:

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DIRECTOR OF SOCIAL SERVICES:

James T. Kemp, A. C. S. W.

HILL CREST HOSPITAL

Hill Crest Foundation, Inc.

6869 Fifth Avenue South

Birmingham, Alabama 35212

PHONE: 205-836-7201



Hang Together

The physicians of Alabama have already collected a dividend from the MASA/Wausau Professional Liability program: At the beginning of this year, St. Paul and all other insurance companies offering physicians liability coverage in Alabama (except Aetna) filed with the Insurance Commissioner a request for authority to double their premium rates. Aetna was already charging 50 per cent above the manual authorized rate and requested an additional 32 per cent increase. USF&G was not renewing their policies. St. Paul would not write any new policies except the lowest risk I and II categories—leaving no place for new business in Classes III, IV, and V to go but to Lloyd's of London for a non-standard policy at excessive rates.

The Insurance Committee and Officers of your State Association spent countless hours trying to find a carrier for the physicians of Alabama who would base premiums entirely on Alabama loss experience and would provide complete financial disclosure of the company's premium income, costs of operations and claims losses.

No company was willing to meet these requirements except Employers of Wausau. Employers agreed with the Association that Alabama doctors have been unfairly rated for several years and pledged to base its own premiums on proven figures which would be audited by the Association's own actuary.

The College of Counsellors and House of Delegates, at the 1972 Annual Session last April, unanimously endorsed this program

as being in the best interest of the membership.

Immediately, other insurance carriers which had found Alabama physicians to be such poor risks changed their attitudes. They withdrew their requests for higher rates; they launched a determined campaign to keep their present policy holders and write new accounts. In a most disgraceful manner some agents and brokers started a whispering campaign against the reliability of Employers of Wausau. False statements were circulated. Premiums were tailored to undercut the MASA/Wausau plan in an attempt to scuttle the program before it even started.

Employers of Wausau has operated a similar program for the doctors of New York State for 23 years; 96 per cent of the eligible members of that State Society are covered. This year their premiums were reduced.

In Georgia and Tennessee, where the doctors have long been united in a single program, premium rates are stabilized at a substantially lower figure than you have been paying in Alabama.

No one challenges the right of any physician to seek a bargain, but we urge the membership to consider the long-range benefits which other state medical societies have won by united effort. Your Insurance Committee and officers would not have endorsed this program and recommended it to the membership without excellent reason to

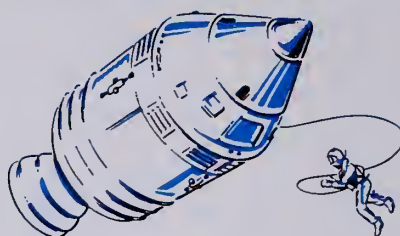
(Continued on Page 255)



0.5 Gm tablets
ORINASE[®]
tolbutamide, Upjohn

Upjohn

The Upjohn Company
Kalamazoo, Michigan 49001
JA72-2407-6
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Man in space, now fait accompli, re-emphasizes the importance of Uro-Phosphate therapy. Research into the effect of space travel on the astronaut reveals that weightlessness causes loss of bone calcium. As the bones are required to bear less and less of the weight of the body they lose calcium, increasing the calcium content of the urine. When physical activity is reduced, the acidity of the urine should be adjusted to keep increased calcium in solution . . . a prophylaxis to prevent kidney or bladder calculi.

Uro-Phosphate®

NOW A SUGAR-COATED TABLET

Each tablet contains: METHENAMINE, 300 mg.; SODIUM ACID PHOSPHATE, 500 mg.

Uro-Phosphate gives comfort and protection when inactivity causes discomfort in the urinary function. It keeps calcium in solution, preventing calculi; it maintains clear, acid, sterile urine; it encourages

complete voiding and lessens frequency when residual urine is present.

Uro-Phosphate contains sodium acid phosphate, a natural urinary acidifier. This component is fortified with methenamine which is inert until it reaches the acid urinary bladder. In this environment it releases a mild antiseptic keeping the urine sterile.

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Manufacturers of Ethical Pharmaceuticals

(Continued from Page 252)

believe that it is a solution to the constant escalation in liability insurance rates which Alabama physicians have experienced.

This is a splendid program offering many advantages to Alabama physicians for a long range program. Our competitors are making

temporary rate inducements. The record shows that when they had an "open market" the rates went up, and up and up.

In summary, a quote from Benjamin Franklin, speaking to the Continental Congress, is in order: "We must all hang together or assuredly we will all hang separately."

Constructive Change

Editor's Note: The following remarks of State Representative Bert Bank are presented in the Journal at his request.

I appreciate the opportunity the Editor of the Journal of the Medical Association of the State of Alabama has afforded me to reply in part to certain issues raised by the President of the Medical Association in the July issue of the Journal.

Many of the comments made by Dr. Philippi in the first part of the article are superb and I share many of his thoughts dealing with the private practice of medicine, that an omnibus compulsory national health care proposal such as Senator Kennedy's would be entirely too expensive and detrimental to the health care of all Americans, and that possibly there is some need for voluntary National Health Insurance. Although I agree with such points made by Dr. Philippi we must draw a distinction between the private practice of medicine and the composition of a Board of Trustees to manage the public health affairs of this State. I do not share your President's observation that anyone who disagrees with organized medicine is a member of a communist plot. I take no personal offense at this implicit charge, but I am sure that 57 Legislators who joined me in voting in favor of my Bill during the last Session to reconstitute the State Board of Health would not be appreciative of an inference that might be drawn from his statements.

In his article Dr. Philippi asked several rhetorical questions which I am pleased to have this opportunity to answer. Let us consider those questions:

- Q. We ask the Health Study Commission to honestly weigh the evidence of the effectiveness of our present medical establishment and the direction it is now taking before recommending change.
- A. The Commission has held eight public hearings involving 1,000 people, 199 of which presented formal testimony. All these proceedings will be published in about a month. There are eight Task Forces involving approximately 150 people who are about the business of collecting data, defining problems, securing expert testimony and consultation, and generally helping the Commission to "honestly weigh the evidence."
- Q. We ask the Commission to review the effectiveness of other State Boards of Health that have been diluted from physician control such as that of Kentucky, which has only four physician members of a 19-member board.
- A. The Commission is very interested in comparing the experiences of other states to our own so that hopefully we may learn from the mistakes of others. It's funny that Kentucky is used as an example. That State Board of Health has 10 physicians on a 13-member board which also serves as the Physician's

Licensure Authority. The last session of the Legislature realized that health—including environmental concerns—is becoming too diverse, broad, and complicated to leave entirely to one profession. They have therefore passed a Bill creating separate licensing boards for physicians, and giving broader representation to the Board of Health. The new structure will not become effective until September 1, 1972. Therefore, if the Kentucky State Board of Health can be termed ineffective, it is not because of dilution of physician strength. It also seems that Dr. Phillippi used an unfortunate example.

Q. I ask Representative Bert Bank if he has not been influenced by the mass media propaganda.

A. As you probably know, I own and operate a radio station in Tuscaloosa, Alabama and therefore belong to what you might consider the mass media. My concern with the composition of State Boards does not stem from propaganda spouted by the mass media, but concerns shared with me by my Alabama constituency.

Q. I ask him to honestly tell me how a paramedical member of the Board of Health, such as a dentist or pharmacist, a graduate nurse, or others, can as effectively serve on this Board as a physician.

A. The Health Study Commission held a public hearing in Mobile, Alabama on May 9, 1972. At that meeting I asked Dr. Phillippi if personally, as an individual, he would have any objections to having a dentist, a pharmacist, and a nurse represented on the Board if there was also a majority of physicians. Dr. Phillippi's response was, "I would agree to such paramedical people being put on the Board."

That's what Dr. Phillippi said. This is what I think: It is possible for a non-

physician to possess intelligence equal to that of physicians. It is possible for a non-physician to be equally dedicated, motivated, and altruistic as a physician. It is possible for non-physicians to be equally effective as physicians on the Board of Health or any other board. It is certainly true that non-physician members will have a different perspective and therefore a different attitude and approach. I think that a different perspective, attitude, and approach would be healthy.

Q. I ask Representative Bank that once he has succeeded in diluting the physician control of this Board just how he intends to prevent its continued dilution and deterioration.

A. It is no mean task to reconstitute and reorganize a very poor State Board. It is almost impossible to "dilute" a very effective one.

Q. I ask Representative Bert Bank if he honestly and sincerely believes that the dilution of our State Board of Health by non-physician members to be in the best interest of the people of Alabama.

A. Yes I do. I should also like to quote from testimony given by Dr. George Hardy at the Public Hearing in Birmingham, Alabama. "One look at the organizational structure of our State Health Department would be enough to give chills and fever to any public administration consultant. There are so many lines of authority emanating from a single top administrator that one has to question how he could possibly handle without assistance all that is his responsibility. The answer quite simply, is that he cannot." Dr. Hardy further stated, "Further suggestion, I would encourage, for the enlightenment of this Commission, the solicitation of confidential review, view of professionals in the field of public health as was done by the APHA Study Team of both state and local agencies. A great number of profession-

als who are dedicated public servants could shed much more light on the problems that I have cited today. These views will help you understand, I believe, why the morale of the public health workers, both state and local, have never been at a lower ebb."

Speaking of the APHA Study, that document states on page 17, "Ninety-seven years ago, the responsibility of serving the Medical Association's Board of Censors and directing the affairs delegated to the Committee of Public Health and Medical Examiners could be effectively managed by one person. However, today is a new day and the science of community health or public health is a new science requiring new competence, new skills, and new knowledge never dreamt of a decade ago . . . required are the skills and knowledge from the biostatistical science seldom used in medical practice, as well as a competence in administrative science completely unnecessary to the private practice of medicine."

In the preliminary report of the APHA Study (which was somehow deleted from the published report dated June 1972) it was stated, "We recommend that a State Board of Health, distinct and separate from the Board of Censors and Medical Examiners, be established with its own Executive Secretary and staff to deal exclusively with the public health responsibilities and functions allocated to the State Health Department."

It is one thing to be defensive of the status quo and resistant to change for the sake of change, but it is something different to ignore real problems. For example:

- Alabama has a higher than national average death rate of new-born children
- Alabama has a higher than national average death rate of infant children
- Alabama has a higher than national average death rate of mothers
- Less than half of the women enrolled in state family planning of maternal and

child health programs receive pap smears to detect the presence of cancer

- Less than half the children who should be immunized ever receive the first dosage of immunization
- Alabama is experiencing, to epidemic proportions, a venereal disease rate of increase
- Alabama incidence of active tuberculosis is higher than national averages

I want all the physicians in the State of Alabama to know that Bert Bank does not advocate change for the sake of change. I am interested in constructive change to bring about a better state of health for the people of the State of Alabama. I wish all Alabama physicians to know that Bert Bank is not "anti-doctor" but very much "pro-doctor." I cherish very dearly the private practice of medicine as I do free enterprise. The private practice of medicine and free enterprise is not the question. The question is the right of every Alabamian to a state of health on a par with every other American.

I look forward to working with the Medical Association in the coming months and years to improve state government in the delivery of public health services.

Tips to . . .

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When using flammable anesthetics, use only those electrical instruments and apparatus which are approved by the U. L. for use in hazardous locations (Class I, Group C, Division 1 locations of Article 500 of the National Electrical Code.)—[Explosion-proof]

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Contraindications: Diabetes mellitus that can be regulated by diet alone; juvenile diabetes mellitus that is uncomplicated and well regulated on insulin; acute complications of diabetes mellitus (metabolic acidosis, coma, infection, gangrene); during or immediately after surgery where insulin is indispensable; severe hepatic disease; renal disease with uremia; cardiovascular collapse (shock); after disease states associated with

hypoxemia.

Warnings: Use during pregnancy is to be avoided.

Precautions: 1. *Starvation Ketosis:* This must be differentiated from "insulin lack" ketosis and is characterized by ketonuria which, in spite of relatively normal blood and urine sugar, may result from excessive phenformin therapy, excessive insulin reduction, or insufficient carbohydrate intake. Adjust insulin dosage, lower phenformin dosage, or supply carbohydrates to alleviate this state. **Do not give insulin without first checking blood and urine sugar.**

2. *Lactic Acidosis:* This drug is not recommended

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presence of azotemia or in any clinical condition that predisposes to sustained hypotension that could lead to lactic acidosis. To differentiate lactic acidosis from ketoacidosis, periodic determinations of ketones in the blood should be made in diabetics previously treated on phenformin, or phenformin and insulin, who have become unstable. If electrolyte imbalance is suspected, periodic determinations should also be made of electrolytes, pH, and the lactate-pyruvate ratio. The drug should be withdrawn and insulin, when required, and other corrective measures instituted immediately upon

the appearance of any metabolic acidosis.

3. Hypoglycemia: Although hypoglycemic reactions are rare when phenformin is used alone, every precaution should be observed during the dosage adjustment period particularly when insulin or a sulfonylurea has been given in combination with phenformin.

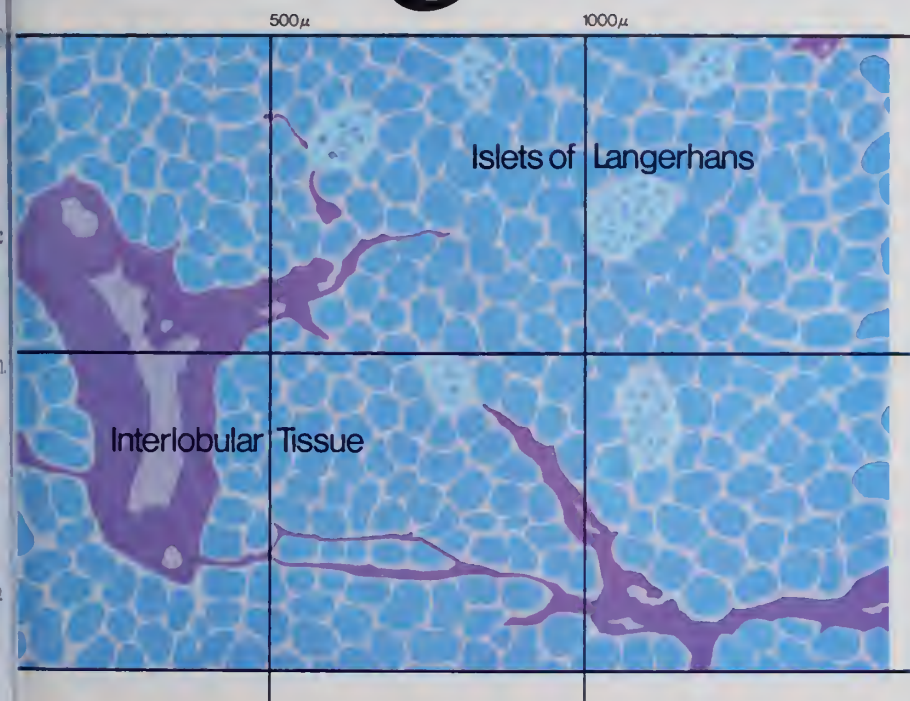
Adverse Reactions: Principally gastrointestinal; unpleasant metallic taste, continuing to anorexia, nausea and, less frequently, vomiting and diarrhea. Reduce dosage at first sign of these symptoms. In case of vomiting, the drug should be immediately withdrawn. Although rare, urticaria

has been reported, as have gastrointestinal symptoms such as anorexia, nausea and vomiting following excessive alcohol intake.
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For complete details, including dosage, please see full prescribing information.

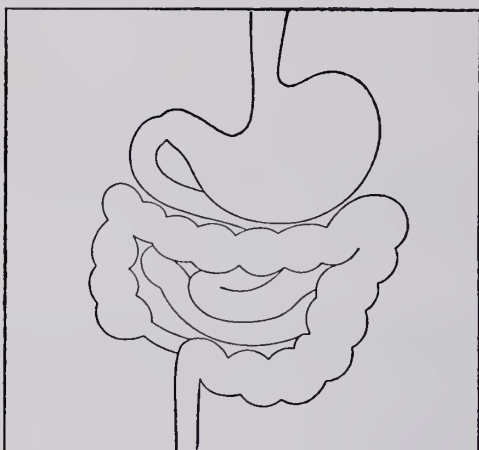
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Contraindications: Anticholinergics should not be used in patients with glaucoma, known prostatic hypertrophy, or pyloric obstruction. Urinary retention may indicate the presence of prostatic hypertrophy. If it occurs, the dose should be reduced or the drug withdrawn. Also contraindicated in patients with known hypersensitivity to one of the components.

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Letter To The Editor

Editor:

One reads a great deal today about the need for improved relations between our profession and the public.

I am convinced that our public relations will depend primarily upon doctor-patient relationships rather than any other approach. We have enough doctors seeing enough patients every day of the year for our contacts. Our job from the standpoint of organized medicine is to get the message to doctors that *they* are the ones who are going to have to improve medicine's public relations. Billboards, displays at state fairs, medical articles, awards and all of the other facets are necessary but certainly, in my opinion, are secondary to the role of the physician and the patient.

I have asked patients many, many times during the past several years while I was on the public relations committee, what can be done to improve the public image of the physician in America? I have never received but one answer: the doctor must show personal interest in the patient, and be willing to talk to them about their problems. The public image of the doctor rushing to his next fee and unable to talk to a patient about his problem or allay his fears, is the public problem with medicine. The key to our legislative problems ultimately lies in how well the doctor back home treats the young lawyer or young businessman in town, how well he treats the lawyer's family and children *before* the lawyer becomes a legislator.

E. W. Stevenson, M. D.

To Get A Doctor, Town Pays His School Costs

There hasn't been a doctor's office in Lexington, population 700, for more than 12 years. But that will change in the fall of 1973.

This Lauderdale County town has insured that. Over the past four years townspeople have invested more than \$15,000 to send a student through the University of Tennessee Medical School at Memphis.

"Our agreement," says Mayor Bobby McGuire, "is that he will come here to practice when he graduates this fall. However, he'll have to spend a year interning. After that he'll come here."

The student, Leo Crabbe, is from nearby Loretta, Tenn.

"We used to have two doctors here but they both died," said the mayor. "They've never been replaced. The nearest medical aid is in Loretta, about ten miles away."

McGuire thinks other small Alabama towns

should carry out a similar program to insure medical help. "It's like giving a scholarship. Only I don't want anyone to come along and try to steal our young man. They'll have to find their own."

Ragland, in St. Clair County, for years had a clinic, but not doctors to make use of it. Under an agreement with the University of Alabama Medical School, several residents agreed to staff it three nights a week.

And in Vincent, in Shelby County, a similar plan has been carried out for several years.

But, according to Mayor McGuire, Lexington is the first town to actually finance a student through medical school in order to provide the town with a doctor.

"We'll all be glad when the Fall of 1973 comes," he said. "It'll be worth the wait."

Frank Sikora,
The Birmingham News

What We Can Do About The Gonorrhea Problem Today

James B. Lucas, M.D.

One year ago, and from this very rostrum, in a summary of the workshop on gonorrhea, we were able to discuss the key factors in establishing prototype gonorrhea control programs. It was recognized then, as now, that we have a far from complete picture of the natural history, pathogenesis, epidemiology, and costs of this ubiquitous disease. Obviously the state of the art remains incomplete and program modifications can be expected to occur as experience is gained and the spectrum of disease extended.

After what has been almost a decade of long gestation, a new national program has been born and believe me, not without considerable dystocia. The infant appears lusty, and the future bright. To borrow a phrase—the last sentence in Phillip Roth's recent best seller—Portnoy's Complaint, "Now we can begin."

The four basic elements discussed last year are now familiar to most of you since they have become the framework of the guidelines for the development of state grant applications but they bare brief repetitions.

Screening

(1) Screening of every possible woman within the reproductive years is obviously aimed at decreasing the reservoir of usually asymptomatic, but infectious disease, in our population. The tools for accomplishing this have been discussed at length, and justifiably so, by Drs. Hinman and Goldfield and in the group session headed by Dr. Holmes. Obviously, further studies and perfection of these relatively crude tools have a high priority. The old concept of the VD Clinic—

as the center of activities—must die if really effective gonorrhea programs are to become a reality. Gonorrhea control begins in other medical facilities, in hospital emergency rooms, in our private offices, in prenatal and post partum clinics, in family planning and other community clinics. What we see and do in the actual venereal disease clinic represents a failure in the delivery of primary medical care. It is in fact the *end* result of our failure to control disease. It should *not* be the focal point for a new program.

(2) The second, long recognized component lies in the development of an epidemiologic strategy and competence, for the expeditious and productive management of gonorrhea cases, both male and female. Interviewing males obviously leads to asymptomatic female cases. We now know that occasional males appear to be truly asymptomatic. Dr. Roberts has discussed such cases in his inimitable style. I can only point out that these men are apparently fully infectious and may be wholesale distributors of disease. Thus one can foresee the eventual impetus for interviewing infected women. The fact that men tend to have more sexual contacts and that the transmission rates per exposure are far higher between infected males and uninfected females than vice versa dictates the need for developing a capability to detect asymptomatic males. In the absence of a serologic test to detect gonorrhea, epidemiology provides the only handle we have on such cases at present.

(3) Public education is a third *sine qua non*. I feel it must be provided across the board, aimed at all sectors and appropriate ages within our population. It seems doubtful that such efforts can, or should, be

Presented at the Second Annual International Venereal Disease Symposium in St. Louis, Missouri on April 12-14, 1972.

(Continued on Page 266)

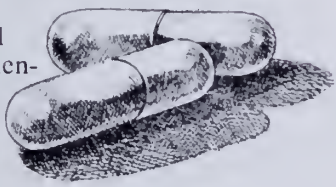
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Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering Librium (chlordiazepoxide hydrochloride) to known addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards. As with all anticholinergic drugs, an inhibiting effect on lactation may occur.

Precautions: In elderly and debilitated, limit dosage to smallest effective amount to preclude development of ataxia, oversedation or confusion (not more than two capsules per day initially; increase gradually as needed and tolerated). Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients. Employ usual precautions

in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: No side effects or manifestations not seen with either compound alone have been reported with Librax. When chlordiazepoxide hydrochloride is used alone, drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally with chlordiazepoxide hydrochloride, making periodic blood counts and liver function tests advisable during protracted therapy. Adverse effects reported with Librax are typical of anticholinergic agents, *i.e.*, dryness of mouth, blurring of vision, urinary hesitancy and constipation. Constipation has occurred most often when Librax therapy is combined with other spasmolytics and/or low residue diets.



Roche Laboratories
Division of Hoffmann-La Roche Inc.
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(Continued from Page 263)

thought of as modifying sexual behavior. However, educational programs presenting an awareness of venereal disease, plus those developing a sense of urgency in obtaining medical care and the locations where such help is available are of inestimable value in control programs. The intellectual atmosphere and moral climate of our nation has come a long way in the past few years and the remaining old barriers to the dissemination of this vital information are fast falling.

(4) The fourth, and in my estimation, the most unexplored and potentially valuable program facet lies in working with the private physician and the private sector of medical care. It seems to me that the private physician is incontestably the *key* to success in the fledgling national program now before us. After all, the private physician sees and treats three-fourths of all gonorrhea patients. No matter how successful we are in the management of the one-fourth of cases that attend public health facilities, logic certainly tells us that we will most assuredly fail in controlling gonorrhea if we cannot make significant in-roads into the management of cases seen in the private sector. This is surely a formidable problem. We are faced with many physicians who fail to practice what they preach. There is a *double standard* in American venereology. Perhaps this is a carryover from the double standards of Puritan and Victorian morality and sexuality. The all too common attitude is that what's good medical practice for the *public sector* patient doesn't really apply to the private patient (and by this I'm referring to more than just case reporting and granting of the permission for epidemiologic investigation). This double standard of care simply doesn't make sense today, if it ever did. I personally find this attitude repudiates my sense of fair play and is almost always without justifiable substance. Physicians have a *higher* responsibility to the public, not to mention a legal one, which must outweigh personal preference. The issue of confidentiality, so often

cited as an excuse for not reporting, is a smoke screen when objectively examined.

It has been suggested that we must reintroduce venereology into medical schools. Hopefully, this will somehow be brought about. However, this is a very long term approach to the problem and the call must be—What can be done today? If history is any guide, support for venereal disease control is cyclic and right now is likely to be the most auspicious opportunity for many years to come. *What can be done to encourage greater participation by private physicians* will largely depend upon the attitudes and determination of those of us in this room. This assembly is made up of the most knowledgeable and strategically placed physicians in the country and on your shoulders the success or failure of this program ultimately rests. Reporting can be improved, if we make it crystal clear to our colleagues that every confidence will be held inviolate and if necessary we give personal reassurances to reluctant physicians.

In addition to reporting, much needs to be accomplished in the private sector. Diagnosis is still frequently carried out as it was in the horse and buggy days. In our last survey, conducted last year, over half of private and hospital laboratories still had not heard about Thayer-Martin selective media. Physician pressure, generated by you, can rapidly make this tool available to every physician, even to those with only occasional needs.

Treatment in the private sector is little short of being totally calamitous. There appears to be very little understanding of the principles underlying the therapy recommendations of recent years. With the latest recommendations, featuring an optional oral or parenteral approach, the confusing spiral of dosage escalations can be firmly brought to a halt. For many years clinical researchers sought the minimal effective dose. This error probably originated because of the original high cost of penicillin in the mid-1940's. We now recognize that this approach to

GONORRHEA PROBLEM TODAY

treatment is wrong and probably actually contributed significantly to the drug resistance problem. The new schedules can halt the emergence of resistant isolates. For once, we appear to be well ahead of the organism. We won't stay ahead, however, unless relative uniformity and widespread application of these schedules is obtained. In this regard, we must convince the private physician of the need for adequate treatment and make these schedules known to him. Arbitrary and often inadequate treatment must be abandoned.

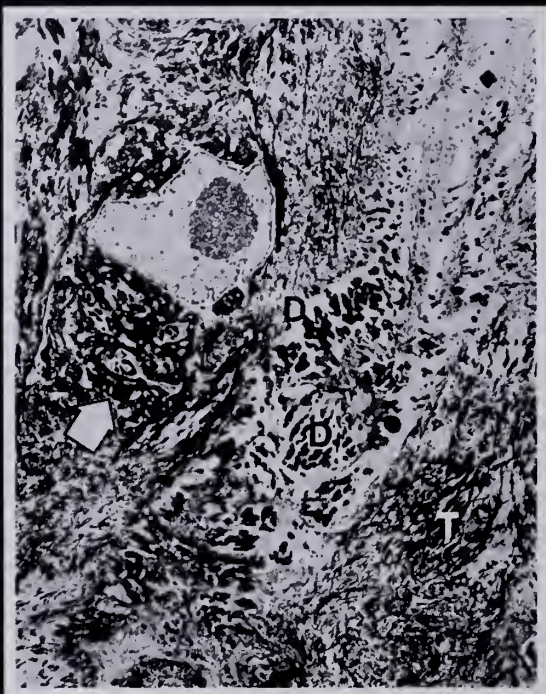
These things can be realistically accomplished by those of us in venereal disease control but it will take real dedication and hard work. The attitudes of business as usual must end today. At last count there were 3,043 counties in the United States. Nearly all have some form of county and other local medical societies. This is where to start. Let me finish with a question—When was the last time that you spoke to such a group, about what *can be* accomplished in gonorrhea control?

RECOMMENDED TREATMENT SCHEDULES FOR UNCOMPLICATED GONOCOCCAL INFECTION OF THE URETHRA, CERVIX, PHARYNX, AND RECTUM

DRUG	ADVANTAGES	DISADVANTAGES
<i>Parenteral</i> —Aqueous procaine penicillin G 4.8 million units IM with 1.0 gram probenecid p. o. (preferably given at least 30 minutes prior to injection)	One session (multiple injections) Aborts incubating syphilis	Penicillin allergy Procaine reactions ? reactions to probenecid
<i>Oral</i> —Ampicillin 3.5 grams p.o. with 1.0 gram probenecid p.o. (May be given simultaneously)	One session Fewer serious immediate reactions	? increase in allergic reactions ? reactions to probenecid Effect on incubating syphilis unknown
FOR PATIENTS IN WHOM PENICILLIN IS CONTRAINDICATED* OR IN WHOM PENICILLIN OR AMPICILLIN HAS BEEN INEFFECTIVE		
<i>Parenteral</i> —Spectinomycin 2.0 grams IM in males 4.0 grams IM in females	One session Little short-term toxicity	Not effective against incubating syphilis Resistance may develop Insufficient data on long-term toxicity
<i>Oral</i> —Tetracycline HCl 1.5 grams p. o. stat then 0.5 grams p. o. qid for 4 days (total 9.5 grams) Other tetracyclines offer no proven therapeutic advantage	Lowered rate of post-gonococcal urethritis	No tetracyclines are effective in single dose Not as effective as above regimens Requires good patient cooperation Effect on incubating syphilis unknown

*May include allergy to penicillin, asthma, hay fever, etc.

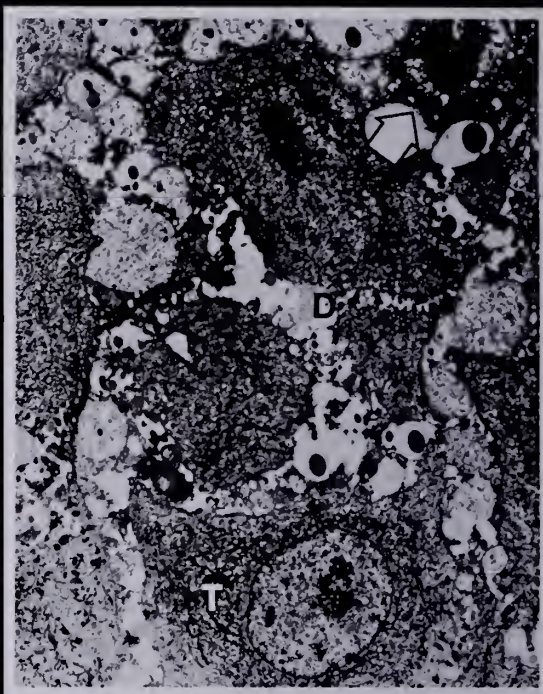
Efudex[®] (fluorouracil) works where it counts...*



Lesion #2—Two days after initiation of therapy. Electron micrograph of solar keratotic skin from patient's hand.

Typical abnormalities are:

Malpighian cells [containing an abundance of thick tonofibrils (T)] which are connected with well-developed desmosomes (D). Note the clumped tonofibrils in the so-called 'dyskeratotic' cell (arrow) indicative of solar keratosis. No change can be noted at this level after two days of therapy. $\times 5000$ (12/16/71)



Lesion #3—Two weeks after initiation of therapy. Electron micrograph of skin from patient's hand.

Improvement shown:

Less conspicuous desmosomes (D), widened intercellular spaces and Malpighian cells showing a remarkable reduction of tonofibrils (T). The arrow indicates a degenerating dyskeratotic cell. $\times 5000$ (12/31/71)

Solar, actinic or senile keratoses

By whatever name they may be known, they commonly occur as multiple lesions and chiefly on the exposed portions of the skin. Because they may be premalignant, it is generally agreed that they should be treated. Surgery, cryotherapy, or electrodesiccation may present certain drawbacks, both for the physician and the patient, but there is Efudex[®] (fluorouracil)—as an alternative to conventional therapy.

Sequence of therapy — Selectivity of response

The easily applied Efudex cream or solution usually begins to show effects within a few days—an erythema in the area of the lesions. Within two weeks after initiation of therapy, this reaction usually reaches its height of unsightliness and discomfort, declining after discontinuation of therapy. This reaction occurs in affected areas. Since the response is so predictable, lesions that do not respond should be biopsied to rule out the presence of a frank neoplasm.

Acceptable results

Treatment with Efudex (fluorouracil) provides highly acceptable cosmetic results posttherapeutically. The incidence of scarring is low.* This is particularly important with multiple facial lesions. Efudex should be applied with care near the nose, eyes and mouth.

5% cream/solution—a Roche exclusive

Only Roche formulates the 5% cream and solution—high in patient acceptability—economical—and high in clinical efficacy than the 2% formulation for lesions of the hands and forearms.

*Data on file, Hoffmann-La Roche Inc., Nutley, New Jersey.



Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110

in treating solar keratoses which may be premalignant.



Before treatment — 12/14/71



After treatment — Two weeks after
therapy stopped — 1/28/72

**This patient's solar keratoses
responded to
Efudex (fluorouracil) 5%**

Before prescribing, please consult complete product
information, a summary of which follows:

Indications: Multiple actinic or solar keratoses.

Contraindications: Patients with known hypersensitivity to
any of its components.

Warnings: If occlusive dressing used, may increase inflam-
matory reactions in adjacent normal skin. Avoid prolonged
exposure to ultraviolet rays. Safe use in pregnancy not
established.

Precautions: If applied with fingers, wash hands immediately.
Apply with care near eyes, nose and mouth. Lesions failing
to respond or recurring should be biopsied.

Adverse Reactions: Local—pain, pruritus, hyperpigmentation
and burning at application site most frequent; also derma-
titis, scarring, soreness and tenderness. Also reported—in-
flammas, stomatitis, suppuration, scaling, swelling, irritability,
medicinal taste, photosensitivity, lacrimation, leukocytosis,
thrombocytopenia, toxic granulation and eosinophilia.

Dosage and Administration: Apply sufficient quantity to cover
lesion twice daily with nonmetal applicator or suitable glove.
Usual duration of therapy is 2 to 4 weeks.

How Supplied: Solution, 10-ml drop dispensers—containing
1% or 5% fluorouracil on a weight/weight basis, com-
bined with propylene glycol, tris(hydroxymethyl)amino-
methane, hydroxypropyl cellulose, parabens (methyl and

propyl) and disodium edetate.

Cream, 25-Gm tubes—containing 5% fluorouracil in a
vanishing cream base consisting of white petrolatum, stearyl
alcohol, propylene glycol, polysorbate 60 and parabens
(methyl and propyl).

**An alternative to
conventional therapy**
Efudex[®]
(fluorouracil)
cream/solution



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but just right!**

"Just right" amounts of Ilosone Liquid 250
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THE JOURNAL

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CASE REPORT

Supraventricular Tachycardia of Wolff-Parkinson-White Syndrome Converted to Sinus Rhythm by Intravenous Lidocaine.

John T. Morris, M.D.

Cullman, Alabama

The management of supraventricular tachycardia due to the Wolff-Parkinson-White syndrome has not been satisfactory. Powerful and sometimes toxic drugs have been used with varying results.¹ The tachycardia has, at times, resisted treatment and remained active for years with accompanying intractable heart failure. Multiple electro shocks have been used.² Sometimes surgery has been employed to sever the Bundle of His or the accessory pathway in order to break up the cyclic phenomena.³ Recently, Cloyd L. Dye, M. D. reported two cases of supraventricular tachycardia in patients with Wolff-Parkinson-White syndrome converted to sinus rhythm by the intravenous injection of lidocaine, a drug generally believed to be ineffective in converting supraventricular tachycardias.⁴ We have one case to report which confirms that lidocaine is an effective agent for the conversion of supraventricular tachycardia due to the Wolff-Parkinson-White Syndrome.

CASE REPORT

Mrs. M. B., a 41-year-old caucasian female was brought to the Cullman Hospital at five a. m. She had been in a state of collapse for about six hours. She was pale and fainted when in the upright position. Her carotid pulse was feeble, blood pressure 60/0. Heart sounds were distant and rapid. Lungs clear. Electrocardiogram showed a rate of 240 with wide bizarre QRS. complexes and unidentified p waves. (Fig. I) She was given 75 mgm. lidocaine intravenously as a bolus and an intravenous infusion of lidocaine, 2 mgm/cc in five per cent dextrose solution was begun at a rate of 5cc per minute. After about 15 minutes the tachycardia converted to sinus rhythm with Wolff-Parkinson-White morphology of the electro-cardiogram. (Fig II) The lidocaine was discontinued and there was no recurrence of the arrhythmia.

DISCUSSION

The supraventricular tachycardia associated with the Wolff-Parkinson-White syndrome frequently reverts spontaneously, or, is easily converted to sinus rhythm with

Dr. Morris is Chairman, Medical Service, Cullman Hospital, Cullman, Alabama.

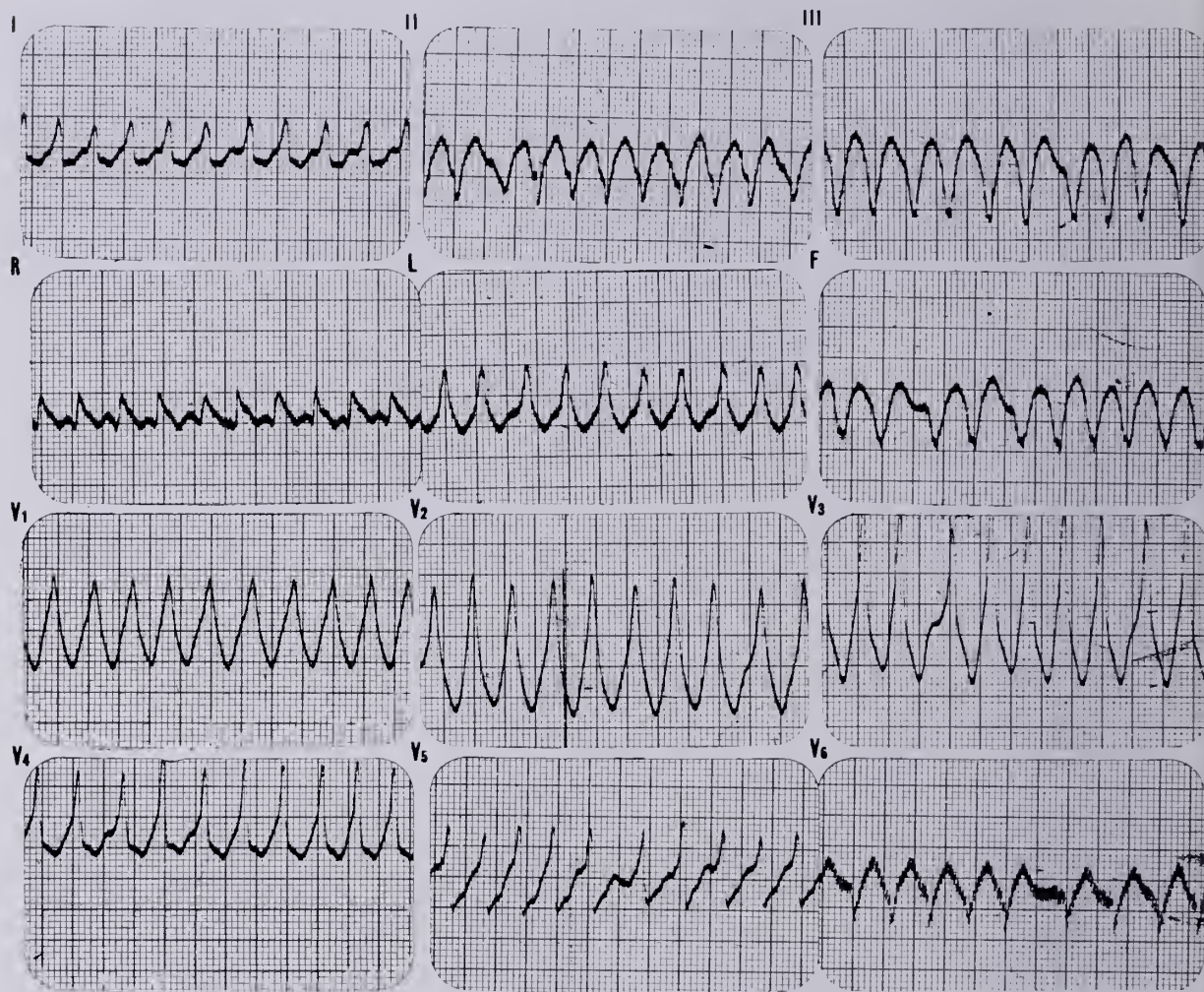


Fig. 1

Electrocardiogram taken during the episode of supraventricular tachycardia.

vagal stimulation. When this does not occur, digitalis, quinidine, and pronestyl have been recommended.⁵ Upon occasion heroic surgical procedures have been employed. Death has been known to occur as a result of this arrhythmia.

Lidocaine, a drug omnipresent in coronary care units, and one proven safe an infinite number of times, is effective in converting the supraventricular tachycardia due to Wolff-Parkinson-White Syndrome.

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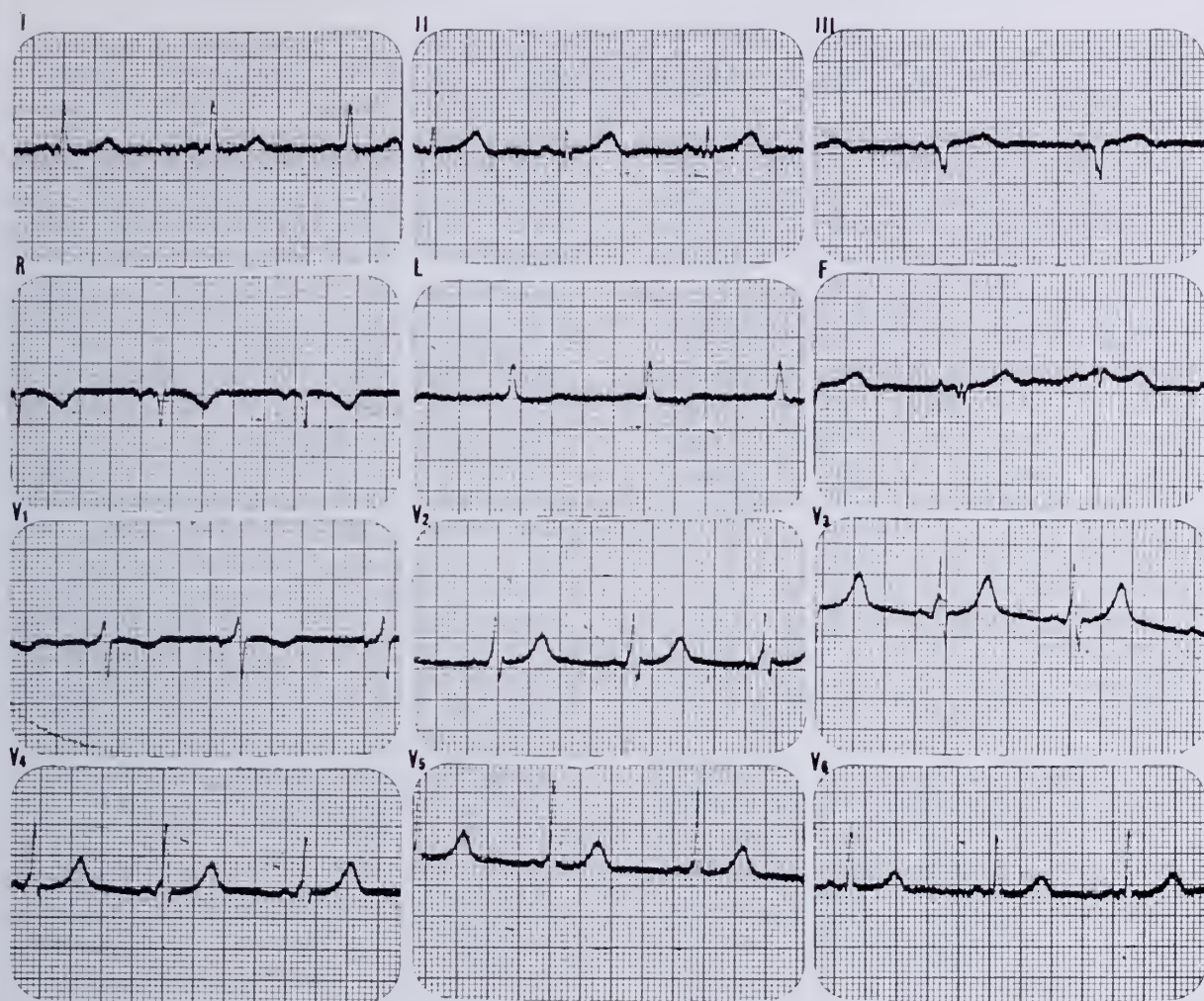


Fig. II

Electrocardiogram taken after conversion by intravenous lidocaine infusion.

Mental Health Of The Aging

A collection of summaries describing research in mental health of the aging supported by the National Institute of Mental Health during the past ten years (1961-1971) has been published by NIMH, a component of HEW's Health Services and Mental Health Administration.

In announcing the availability of *NIMH Research on the Mental Health of the Aging*, Dr. Thomas E. Anderson, Chief of the Section on Aging at NIMH, said, "The summaries, prepared by Mrs. Marie L. Blank, Social Work Consultant, reveal several trends which, for the most part, are reflec-

tive of movements that have been taking place in the field of gerontology during the past decade. Generally, the 'mental illness model' has been avoided and the reports describe attempts to measure constructs such as 'life satisfaction' and 'functioning ability' rather than measures of 'neuroticism' or 'maladaptation.'"

Dr. Anderson went on to say, "It would appear that scientists who have addressed themselves to studying adjustment in later life have adopted the concept of 'positive mental health' rather than concentrating on

(Continued on Page 278)

Podiatry And Its Role In Diabetic Medicine

Stanford Rosen, D.P.M.

Birmingham, Alabama

The development of podiatry as a specialized division of medicine has been a long and gradual process. It was early recognized that the problems particular to this field of work should be grouped together as one subject for study and that these problems are best handled by individuals especially trained and experienced in their diagnosis and treatment. With the accelerated development in education and training, podiatry has finally become an accepted specialty. The most descriptive definition of podiatry is expressed as the "medical specialty that includes the investigations, preservation, restoration and development of the function and form of the foot by medical, surgical and physical methods."

The human foot can be a remarkable "mirror" for constitutional disease; it has been compared to the human eye in early diagnostic importance. Initial signs of diabetes, anemia, peripheral vascular, and other systemic disease are often detected in the foot first. The incidence of foot problems points out the need for more and better foot health care.

Perhaps the best way to introduce the subject of the podiatrist and his role in medicine is to outline the scope and limitations of his practice, and then review some of the common conditions and treatments in his experience.

Of all the medical specialties, podiatry is undoubtedly the least understood by both lay and professional groups. The etymology of the word podiatry derives from the Greek roots *pod*i (foot) and *iatri*st (specialist).

A podiatrist's required training after high school is two years of premedical courses before entering a college of podiatry. Podiatry school consists of four years of basic

medical subjects, including anatomy, chemistry, physiology, pathology and other medical and allied subjects as they relate to the feet and lower extremities. Afterward he serves an internship in surgery, and there are now a few residency programs, also. The typical podiatric faculty is composed of doctors of medicine, podiatric medicine, pharmacy and philosophy.

The faculty and the curriculum are designed to give the prospective podiatrist a thorough foundation in the practice of medicine as it pertains to the feet and lower extremities. Podiatry is not a cult nor a unique mode of therapy but it is the practice of medicine and surgery in a limited area of the human body. The American Medical Association has declared podiatry as filling a necessary gap neglected by general medicine.

To review all the problems and treatments seen in a podiatry practice would be an endless task, but following is a discussion of a few common problems and their treatments, especially those observed in diabetics.

The infected ingrown nail is perhaps as common a foot condition as there is. The average infected ingrown nail can drain for weeks and months without the infection advancing. Therefore, systemic therapy is not usually indicated. After the offending portion of the nail has been removed the drugs indicated are Burrows Solution and modifications, saline, and similar soaks. Within five days most of these infections will disappear unless they are complicated by significant vascular insufficiency. Most podiatrists avoid the use of antibiotic ointments, powders, and soaks. There is a growing school of thought maintaining that the use of homeopathic amounts of antibiotics in powders and ointments may gradually sensitize patients to the point that subsequent

Dr. Rosen is assistant professor of podiatry in medicine, University of Alabama in Birmingham.

therapeutic doses produce side reactions. Antibiotics are usually not indicated in infected ingrown nails. After eliminating the infection; surgical removal is indicated for the offending side. This can be performed on diabetics as long as the skin is warm and a pulse is palpable in the dorsalis pedis artery and oscillometric readings are normal. Healing will usually take place. We, of course, run into the occasional patient in which the microvascular disease is so severe that even in the presence of a bounding dorsalis pedis pulse healing will not occur. We need better diagnostic techniques in this area.

In the last six months we have performed on a total of 75 patients this procedure by using the alcohol-phenol technique. Post operatively they were seen within 24 hours for applications of dry sterile dressing, and then again in three days for the same. After the second post operative visit they were given Otobione Solution 10cc and instructed to dress the toes twice daily and apply dry sterile dressing for one week. Next re-appointment was given for two weeks, and medication was continued. Out of these 75 patients, five had continued draining after four post operative visits and the longest being persistent drainage for three months after which healing occurred.

The corticosteroids are a great aid to the podiatrist. The foot as much if not more than the other parts of the body, is subject to various types of arthritis. Because the foot is a section of the body we can not properly rest, relief from painful foot joints and increased mobility in rigid foot joints is a desirable objective. Intra-articular and peri-articular injections of Hydrocortizone and prednisolone and others serve this objective. The human foot quite frequently is a site for the development of ganglia. These are almost always eliminated by injections of corticosteroids. Inflamed and painful bursae over bunion joints, under and behind the heel do not disappear with the same ease as do cysts and ganglia's. They do respond

well and improve, however. Under proper therapy, they are eliminated completely.

A great many corns that develop on toes will suddenly develop an enlarged bursal sac underneath it. Reducing the bursitis in these cases very often eliminates the pain and a small surgical procedure in the office will eliminate them. We would like to re-iterate that surgery is only performed on diabetics when the patient has a dorsalis pedis pulse and the foot is warm and the diabetes is well controlled for the patient according to their past blood sugars and general health. Under these conditions the patient should be a good surgical candidate. Our experience in corn surgery by osteotripsy has been excellent in diabetics. This has only been done under the conditions previously described. We have performed 25 osteotripsy in the last six months on chronic heloma durum and molle that have been observed and treated conservatively for many years, the results were 100 per cent and complications were nil. I believe these results were obtained because of the strict criteria we observed before surgery.

The view of "hands off" in diabetics is no longer the case. The corticosteroids in ointment and lotion form have been of great value in dermatological foot therapy. Besides controlling itch and helping in contract and atopic dermatoses, their greatest use has been in the treatment of adhesive tape reactions. Adhesive plaster strappings are almost absolutely essential in the correction of foot conditions. Since they must be applied repeatedly, a great many feet thus treated will develop adhesive dermatitis. This condition responds well to the corticosteroids.

Probably the most important foot problem in diabetes is the ulcer. Following is an outline of our philosophy on this condition.

Diabetic ulcers practically always involve the lower extremities, the most neglected part of the anatomy. These ulcers are due to neuropathy, a vascular insufficiency, and

trauma. The atherosclerotic process in the diabetic continues to advance in spite of therapy, with the result that the diabetic's vessels seem to be ten years older than the patient.

Diabetic ulcers can be divided into four main classes. The first is the chronic ulcer, appearing as a mass of keratotic tissue, dirty brown or black. The second is a variation of the first. Starting from the ulcer there may be a sinus, usually superficial, which burrows under the skin and terminates in a sac of pus. The third is brilliant red, moist and usually odorless. It forms on the distal ends of the toes, usually the second, third or fourth. The fourth type presents in addition to the ulcer itself, a quantity of soft mushy tissue, adjacent to the primary lesion.

The tendency toward an ulcer is increased by the fact that the tissues of the diabetic are less resistant to infection than those of the non-diabetic. These tissues break down more readily, have a lower, recuperative power, and are slower to heal. Trauma is the principle factor involved in ill-fitting footwear. Other etiological factors are "bath-room surgery" and direct trauma, such as objects falling on the foot. Often coupled with this is the lack of good foot hygiene and poor diabetic control. We emphasize poor diabetic control because most diabetics are not really controlled. We therefore prefer to work in close harmony with the primary physician in order to insure good metabolic control of the diabetes.

All diabetics presenting themselves with foot ulcers should have complete roentgenographic studies. The ulcer is debrided to determine the extent and depth of the lesion. Possible infection is considered and culture and sensitivity is taken, foot pulses are elicited, and the temperature of the skin is noted. The patient is questioned concerning cramps, paresthesias, numbness, and vague pains in the extremities.

The treatment has been widely used for many years. Our most important goal is preventive treatment. Perhaps the best

methods of treatment is the education of the patient for the prevention of ulcers. Some rules for foot care that we have compiled are:

1. Keep the feet clean and avoid "athlete's foot."
2. Avoid bruises and cuts, giving proper attention to corns, stockings, and shoes.
3. Avoid burning or freezing the feet.
4. Avoid strong antiseptics.
5. Avoid constricting the circulation.
6. Avoid tobacco.
7. Provide rest for the injured feet.
8. Promote circulation by contrast baths, massage, and exercise.
9. Avoid tight garters or shoes.
10. Avoid hot water bottles and razor blades, especially rusty ones.
11. Cut toenails straight across.
12. Use a soft towel to dry your feet. Do not rub them.
13. Massage feet with lanolin or olive oil daily.
14. Employ foot exercise to improve circulation.
15. *Most Important:* Have your feet examined by a professional.

No ulceration can be treated for closure until the infection has been obliterated. Chemotherapeutic drugs of value include:

1. Alcohol to swab out the ulcer.
2. Azochloramide intricate (1:500) applied daily depending on the depth of the ulcer.
3. Sulfathiazole ointment if pus is present.
4. Scarlet red ointment (5%) every two days if ulcer is large.
5. Silver nitrate (5%) if ulcer is moist and discharging.
6. Cod liver oil ointment (45%) every 48 hours if slough is deep.

7. Gentian violet ointment (2%), a bacteriostatic astringent and stimulant, applied every two days.
8. 300 mg. of vitamin C daily. This is questionable, but in some cases shows results.
9. Chlorophyll chloresium (Rystsin), a wet dressing used initially. After satisfactory granulation begins, change to ointment.
10. Oral vasodilator drugs: Niacin paveril phosphate (Lilly), preisicoline (Ciba), tubalin (deproteinated kidney extract). Tubalin acts on capillary, arteriole and small vessel circulation of the peri-ulcer area; it also has a blocking effect on normal vasoconstrictor response.
11. Pantotherylol alcohol analogue of panthothenic acid.
12. Hydrophilized iodine gel.

13. Cheifetz gel foam technique.
14. Proteolytic Enzyme-Biozyme B.I.D.

If the ulcerations do not respond to any form of medication, surgery may be indicated. This would include lumbar Sympathectomy and/or skin grafting. For these procedures the patient is referred to the proper surgical specialist.

Podiatry is a much-needed specialty in medicine, especially for the diabetic. The podiatrist should be able to detect and treat problems before they become serious. He may treat a patient surgically to remove a corn, ingrown nail, or verruca which eventually would have become ulcerated and gangrenous. Prevention and patient education is a responsibility, not only of the podiatrist, but of the entire medical team. Podiatry fortunately has become an integral member of this team which includes the internist, nurse and dietitian.

A Step Closer To Frozen Organ Banks

University of Minnesota researchers have successfully reimplanted a dog's kidney following preservation through freezing—a big step towards the development of frozen organ banks for transplants.

The research team, headed by Dr. Ronald H. Dietzman, removed a kidney from a dog, froze it for a short time, thawed it and returned it to the animal's body where it sustained life. According to the National Society For Medical Research the group's work was reported at the ninth annual Cryobiology Conference held in the nation's capital during July.

Dr. Dietzman pointed out that other groups have transplanted organs back into donor animals following the freeze and thaw process, but the big question in this procedure is can such an organ sustain life?

The concept of long-term storage of organs through freezing has been bolstered partly

by the preservation of human semen for artificial insemination and freezing pigskin for later use on burn victims.

Many questions must be answered before human organs banks become a reality. The freezing process must be perfected so that whatever temperature is used to preserve an organ does not destroy it. Even if this is solved, scientists still must deal with the tissue rejection phenomenon or the human parts that are kept in storage cannot be used.

The Minnesota team used liquid nitrogen to cool the dog's kidney to 20 degree Centigrade. Following the thawing and transplantation procedure, within a few weeks that kidney began to function quite normally. Their next step in additional animal studies is to try and repeat the success at lower temperatures until minus 196 degrees Centigrade is attained. That is the temperature that scientists believe is necessary for long-term storage of organs.

Treatment Of Minors

QUESTIONS:

Does a physician need the consent of parents to treat a child in the case of V. D.? Drug Dependency?

22T. 104(17)

Any minor may give effective consent for any legally authorized medical, health or mental health services to determine the presence of or to treat *pregnancy, V. D., drug dependency, alcohol toxicity, or any reportable disease*, and the consent of no other person is necessary.

22T. 104(18)

Any legally authorized medical, dental, health or mental health services may be rendered to minors of any age without the consent of a parent or legal guardian when, in the physician's judgement, an attempt to secure consent would result in delay of treatment, which would increase the risk to the minor's life, health, or mental health.

22T. 104(15)

A minor who is 14 years old, or graduated from high school, or married, or divorced, or is pregnant, may give effective consent

to any legally authorized medical, dental, health or mental health service for himself and the consent of no other person is necessary.

22T. 104(16)

Minor children who are married and have had children may give consent to have their children treated.

22T. 104(21)

1) The consent of a minor who professes to be a minor whose consent alone is effective to (receive) medical, dental, etc. services shall be deemed effective without the consent of the minors parents or legal guardian, if the physician relied in good faith on the representation.

2) . . . the physician will not be liable for acting without consent when he relied on the representations of the minor in good faith.

3) . . . but although the minor may give his consent, he cannot be held to any agreement by which he agreed to expressly or implicitly waive any right or cause of action.

MENTAL HEALTH OF THE AGING

(Continued from Page 273)

the more traditional concerns with psychopathological phenomena."

Summaries of studies designed to investigate factors effecting adjustment in later life display strong social-environmental interests. Closely related are studies which examine and evaluate various types of housing and a variety of supportive services.

Recognizing the importance of achieving a satisfying social role, several studies deal with retirement and factors associated with successful adjustment, such as the creation of new roles for older individuals. Those

studies more directly concerned with traditional mental health aspects of aging tend to stress the prevention and treatment of psychological and social maladjustments through the manipulation of the environment.

The bulk of the research was supported through the Applied Research Grants Program and, at an earlier time, through the Mental Health Projects Grants Program.

Copies of *NIMH Research on the Mental Health of the Aging* (DHEW Publication No. (HSM) 72-9133) are available from the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C., 20402. Price: 75¢ (paper cover).

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Before prescribing, see complete prescribing information in SK&F literature or *PDR*.

***Indications:** Edema associated with congestive heart failure, cirrhosis of the liver, the nephrotic syndrome; steroid-induced and idiopathic edema; edema resistant to other diuretic therapy. Also, mild to moderate hypertension.

Contraindications: Pre-existing elevated serum potassium. Hypersensitivity to either component. Continued use in progressive renal or hepatic dysfunction or developing hyperkalemia.

Warnings: Do not use dietary potassium supplements or potassium salts unless hypokalemia develops or dietary potassium intake is markedly impaired. Enteric-coated potassium salts may cause small bowel stenosis with or without ulceration. Hyperkalemia (>5.4 mEq/L) has been reported in 4% of patients under 60 years, in 12% of patients over 60 years, and in less than 8% of patients overall. Rarely, cases have been associated with cardiac irregularities. Accordingly, check serum potassium during therapy, particularly in patients with suspected or confirmed renal insufficiency (e.g., elderly or diabetics). If hyperkalemia develops, substitute a thiazide alone. If spironolactone is used concomitantly with 'Dyazide', check serum potassium frequently—both can cause potassium retention and sometimes hyperkalemia. Two deaths have been reported in patients on such combined therapy (in one, recommended dosage was exceeded; in the other, serum electrolytes were not properly monitored). Observe patients on 'Dyazide' regularly for possible blood dyscrasias, liver damage or other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium (triamterene, SK&F). Rarely, leukopenia, thrombocytopenia, agranulocytosis,

and aplastic anemia have been reported with the thiazides. Watch for signs of impending coma in acutely ill cirrhotics. Thiazides are reported to cross the placental barrier and appear in breast milk. This may result in fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly other adverse reactions that have occurred in the adult. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

Precautions: Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in postsympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting (may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Rarely, necrotizing vasculitis, paresthesias, icterus, pancreatitis, and xanthopsia have occurred with thiazides alone.

Supplied: Bottles of 100 capsules.

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The following patient profiles represent typical clinical situations, but do not necessarily represent actual cases.

Age 22, previously normal menses with occasional menorrhagia. Now on a sequential O.C. for four months. Complains of heavy flow, occasional intracyclic bleeding, edema, tender swollen breasts.

Indicates estrogen excess.

1st choice: Switch to a combination 50-mcg.-estrogen O.C. (such as **Demulen**[®]).

Age 19, small breasts, minor hirsutism, oily hair and skin. History of metrorrhagia, skipped or scanty menses. New user.

Indicates androgenic excess or estrogen deficiency (fertility is suspect).

1st choice: An estrogen-dominant O.C. (such as **Enovid-E**[®]).

Age 25, average frame, poor complexion. No problem with menses, normal para 1. On a low-estrogen/high-progestogen O.C. for two years. Now complains of scanty flow, decreased libido, depression.

Indicates probable buildup of progestogen-related side effects.

1st choice: Switch to a center-spectrum O.C. with more estrogen, less progestational activity (such as **Ovulen**[®]).

Age 21, short, mammosome, with normal menses, some acne. Was put on pre-nuptial regimen of 50-mcg.-estrogen/moderate-progestogen O.C. for two months. Now has increased acne.

Indicates metabolic production of androgen or relative estrogen deficiency.

1st choice: Switch to a 100-mcg.-estrogen combination (such as **Enovid-E**[®] or a sequential).



Unmasked, physiologically and anatomically, they're not all the same. A basic difference lies in their hormone profiles. One may secrete too much estrogen, another not enough...or perhaps too much androgen; the vast majority would fit somewhere into the broad center spectrum.

Although the profiles described below may not be completely predictive, in optimal O.C. selection, the estrogen-progestogen activity ratio should be carefully matched to the patient profile. Searle offers you O.C.s in a range not only suitable for your patients in the balanced center spectrum, but also adaptable to the patient with another type of hormone profile.

Oral contraceptives are complex medications. Among the commonly reported adverse reactions are: intracycle bleeding, fluid retention, tender or swollen breasts, exacerbation of acne condition, changes in libido, amenorrhea while on medication and upon discontinuance, nausea, leg cramps, headaches, weight gain. Therefore, after reference to the prescribing information, oral contraceptives should be prescribed with care.

*Note: In some patients any level of exogenous estrogen or progestogen may produce symptoms of excess hormone activity.

5, tall, slender, athletic,
at chest On a progestogen-
ant 50-mcg -estrogen O.C.
current trichomoniasis
onilia
icates estrogen deficiency and
s of progestogen in current O.C.
choice Switch to a com-
on pill with 100 mcg.
en and less progestational
y (such as **Enovid-E**® or
n or a sequential).

Age 23, "Miss America" figure,
previously normal menses, healthy
skin and hair. On a 50-mcg -
estrogen pill for four months
Complains of intracyclic bleeding.

Indicates probable need for
more estrogen

1st choice Switch to a center-
spectrum O.C. with more estrogen
and moderate progestogen
dominance (such as **Ovulen**®).

Age 21, college senior, average
build On highly progestogen-
dominant/low-dose-estrogen O.C.
for six months. Now complains of
amenorrhea, between-cycle
headaches, weight gain.

Indicates probable progestogen
excess

1st choice Switch to a center-
spectrum pill (such as **Ovulen**®).

Age 27, slightly overweight,
multiparous. Nausea with all three
pregnancies and with a sequential
O.C. three years ago. Has pre-
menstrual fluid retention and
leg cramps.

Indicates probable excess of
estrogen.

1st choice A 50-mcg -estrogen/
progestogen-dominant pill
(such as **Demulen**®).

Ovulen® a balanced
center-spectrum O.C.
for most

Each white tablet contains ethynodiol diacetate 1 mg./mestranol 0.1 mg.

Demulen® a moderately
progestogen-dominant O.C.
for many

Each white tablet contains ethynodiol diacetate 1 mg./ethinyl estradiol 50 mcg.

Each pink tablet in Ovulen-28® and Demulen®-28 is a placebo, containing no active ingredients.
Both Ovulen and Demulen are available in 21- and 28-pill schedules.

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Enovid-E® a moderately
estrogen-dominant O.C.
for some

Each tablet contains norethynodrel 2.5 mg./mestranol 0.1 mg.

SEARLE Product of Searle Laboratories Division
G.D. SEARLE & CO.
P.O. Box 5110, Chicago, Illinois 60680
Where "The Pill" Began

brief summary
prescribing information,
see next page.

a family of O.C. products to help you match
the right pill to the right patient

Ovulen®

Each white tablet contains
ethynodiol diacetate 1 mg / mestranol 0.1 mg.

Demulen®

Each white tablet contains
ethynodiol diacetate 1 mg / ethinyl estradiol 50 mcg.

Each pink tablet in Ovulen-28® and Demulen®-28 is a placebo, containing no active ingredients.

Actions—Ovulen and Demulen act to prevent ovulation by inhibiting the output of gonadotropins from the pituitary gland. Ovulen and Demulen depress the output of both the follicle-stimulating hormone (FSH) and the luteinizing hormone (LH).

Special note—Oral contraceptives have been marketed in the United States since 1960. Reported pregnancy rates vary from product to product. The effectiveness of the sequential products appears to be somewhat lower than that of the combination products. Both types provide almost completely effective contraception.

An increased risk of thromboembolic disease associated with the use of hormonal contraceptives has now been shown in studies conducted in both Great Britain and the United States. Other risks, such as those of elevated blood pressure, liver disease and reduced tolerance to carbohydrates, have not been quantitated with precision.

Long-term administration of both natural and synthetic estrogens in subprimate animal species in multiples of the human dose increases the frequency of some animal carcinomas. These data cannot be transposed directly to man. The possible carcinogenicity due to the estrogens can be neither affirmed nor refuted at this time. Close clinical surveillance of all women taking oral contraceptives must be continued.

Indication—Ovulen and Demulen are indicated for oral contraception.

Contraindications—Patients with thrombophlebitis, thromboembolic disorders, cerebral apoplexy or a past history of these conditions, markedly impaired liver function, known or suspected carcinoma of the breast, known or suspected estrogen-dependent neoplasia and undiagnosed abnormal genital bleeding.

Warnings—The physician should be alert to the earliest manifestations of thrombotic disorders (thrombophlebitis, cerebrovascular disorders, pulmonary embolism and retinal thrombosis). Should any of these occur or be suspected the drug should be discontinued immediately.

Retrospective studies of morbidity and mortality conducted in Great Britain and studies of morbidity in the United States have shown a statistically significant association between thrombophlebitis, pulmonary embolism, and cerebral thrombosis and embolism and the use of oral contraceptives. There have been three principal studies in Britain^{1,3} leading to this conclusion, and one⁴ in this country. The estimate of the relative risk of thromboembolism in the study by Vessey and Doll³ was about sevenfold, while Sartwell and associates⁴ in the United States found a relative risk of 4.4, meaning that the users are several times as likely to undergo thromboembolic disease without evident cause as nonusers. The American study also indicated that the risk did not persist after discontinuation of administration and that it was not enhanced by long-continued administration. The American study was not designed to evaluate a difference between products. However, the study suggested that there might be an increased risk of thromboembolic disease in users of sequential products. This risk cannot be quantitated, and further studies to confirm this finding are desirable.

Discontinue medication pending examination if there is sudden partial or complete loss of vision, or if there is a sudden onset of proptosis, diplopia or migraine. If examination reveals papilledema or retinal vascular lesions medication should be withdrawn.

Since the safety of Ovulen and Demulen in pregnancy has not been demonstrated, it is recommended that for any patient who has missed two consecutive periods pregnancy should be ruled out before continuing the contraceptive regimen. If the patient has not adhered to the prescribed schedule the possibility of pregnancy should be considered at the time of the first missed period.

A small fraction of the hormonal agents in oral contraceptives has been identified in the milk of mothers receiving these drugs. The long-range effect to the nursing infant cannot be determined at this time.

Precautions—The pretreatment and periodic physical examinations should include special reference to the breasts and pelvic organs, including a Papanicolaou smear since estrogens have been known to produce tumors, some of them malignant, in five species of subprimate animals. Endocrine and possibly liver function tests may be affected by treatment with Ovulen or Demulen. Therefore, if such tests are abnormal in a patient taking Ovulen or Demulen, it is recommended that they be repeated after the drug has been withdrawn for two months. Under the influence of progestogen-estrogen preparations pre-existing uterine fibromyomas may increase in size. Because these agents may cause some degree of fluid retention, conditions which might be influenced by this factor, such as epilepsy, migraine, asthma, cardiac or renal dysfunction, require careful observation. In breakthrough bleeding, and in all cases of irregular bleeding per vaginam, nonfunctional causes should be borne in mind. In undiagnosed bleeding per vaginam adequate diagnostic measures are indicated. Patients with a history of psychic depression should be carefully observed and

the drug discontinued if the depression recurs to a serious degree. Any possible influence of prolonged Ovulen or Demulen therapy on pituitary, ovarian, adrenal, hepatic or uterine function awaits further study. A decrease in glucose tolerance has been observed in a significant percentage of patients on oral contraceptives. The mechanism of this decrease is obscure. For this reason, diabetic patients should be carefully observed while receiving Ovulen or Demulen therapy. The age of the patient constitutes no absolute limiting factor, although treatment with Ovulen or Demulen may mask the onset of the climacteric. The pathologist should be advised of Ovulen or Demulen therapy when relevant specimens are submitted. Susceptible women may experience an increase in blood pressure following administration of contraceptive steroids.

Adverse reactions observed in patients receiving oral contraceptives—A statistically significant association has been demonstrated between use of oral contraceptives and the following serious adverse reactions: thrombophlebitis, pulmonary embolism and cerebral thrombosis.

Although available evidence is suggestive of an association, such a relationship has been neither confirmed nor refuted for the following serious adverse reactions: neuro-ocular lesions, e.g., retinal thrombosis and optic neuritis.

The following adverse reactions are known to occur in patients receiving oral contraceptives: nausea, vomiting, gastrointestinal symptoms (such as abdominal cramps and bloating), breakthrough bleeding, spotting, change in menstrual flow, amenorrhea during and after treatment, edema, chloasma or melasma, breast changes (tenderness, enlargement and secretion), change in weight (increase or decrease), changes in cervical erosion and cervical secretions, suppression of lactation when given immediately post partum, cholestatic jaundice, migraine, rash (allergic), rise in blood pressure in susceptible individuals and mental depression.

Although the following adverse reactions have been reported in users of oral contraceptives, an association has been neither confirmed nor refuted: anovulation post treatment, premenstrual-like syndrome, changes in libido, changes in appetite, cystitis-like syndrome, headache, nervousness, dizziness, fatigue, backache, hirsutism, loss of scalp hair, erythema multiforme, erythema nodosum, hemorrhagic eruption and itching.

The following laboratory results may be altered by the use of oral contraceptives: hepatic function: increased sulfobromophthalein retention and other tests; coagulation tests: increase in prothrombin, Factors VII, VIII, IX and thyroid function: increase in PBI and butanol extractable protein bound iodine and decrease in T³ uptake values; metyrapone test and pregnanediol determination.

References: 1. Royal College of General Practitioners: Oral Contraception and Thrombo-Embolic Disease, *J. Coll. Gen. Pract.* 13:267-279 (May) 1963. 2. Inman, W. H. W., and Vessey, M. P.: Investigation of Deaths from Pulmonary, Coronary, and Cerebral Thrombosis and Embolism in Women of Child-Bearing Age, *Brit. Med. J.* 2:193-199 (April 27) 1968. 3. Vessey, M. P., and Doll, R.: Investigation of Relation Between Use of Oral Contraceptives and Thromboembolic Disease. A Further Report, *Brit. Med. J.* 2:651-657 (June 14) 1969. 4. Sartwell, P. E.; Masi, A. T.; Arthes, F. G.; Greene, G. R., and Smith, H. E.: Thromboembolism and Oral Contraceptives: An Epidemiologic Case-Control Study. *Am. J. Epidemiol.* 90:365-380 (Nov) 1969.

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Indication—Enovid-E is indicated for oral contraception.

The Special Note, Contraindications, Warnings, Precautions and Adverse Reactions listed above for Ovulen and Demulen are applicable to Enovid-E. Should be observed when prescribing Enovid-E.

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Where "The Pill" Began



Continuing Medical Education Issues

Rutledge W. Howard, M. D.

Almost five years ago the National Advisory Commission on Health Manpower, in its report to President Johnson, made some interesting comments about closing the quality gap in health care. The report stated that there does indeed exist a quality gap in health care.

Among other things, it noted that progress in medical science and technology has increased our ability to prevent and cure illness, but at the same time, this progress has greatly increased the difficulty of assuring that practice fully exploits the potential of current knowledge.

Reliance on quality controls in formal education and licensure have been the primary means of assuring that physicians used the best techniques and information available; but with the increasing pace of medical advances these "one time" controls are not enough. The physician's education, it said, must be continued as long as the physician practices. Greatly improved

methods of diagnosis and treatment can be developed after he completes his training. If the physician is unaware of the new developments, he will probably continue to use the out-dated and far less effective techniques and remedies.

More over, although the physician remains the central figure in the profession of medical care, he must increasingly rely upon others to assist him. Not only must the physician apply current knowledge and techniques, but the essential services complementing his own work must meet equivalent modern standards.

Objective surveys reported in the American Journal of Public Health for July, 1957, in JAMA for October 13, 1956, in a Columbia University School of Public Health report in 1964, and in a Department of Health Education and Welfare report in June, 1967 have consistently found that hospital care does not conform uniformly to the standards of best medical practice. Deviations from best possible practice appear to be significant and widespread.

Similarly, the Commission's report states that there are serious questions about re-

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liability and accuracy of some medical laboratories that perform tests which are an essential component of modern diagnostic techniques.

This report was a motivating factor to some extent in our current thinking and changes in the provision of continuing medical education. The Commission's report points out that once he is licensed and in practice, the health professional, himself, must have ready access to the latest medical knowledge and techniques. It notes that simply making educational opportunities available to the physician will not assure utilization of these opportunities unless sufficient incentives are provided, the report went on to say that one way of providing such incentives would be to relicense health professionals periodically on the basis of acceptable performance in programs of continuing education, or on the basis of challenge examinations for those who choose not to participate formally in continuing education, or who choose not to document such participation. The Commission indicates that both educational programs and challenge examinations should be directed to the practitioner's specialty, and not to the broad field of medical science as is usually done by initial licensure. Above all, the emphasis in such programs, the report states, should not be punitive. The primary purpose of these programs should be to make easily available to the practitioner, the new knowledge which he now struggles to obtain.

The Commission realized that there are many potential drawbacks to the proposal for relicensing. In the first place, licensure can be granted only by a governmental agency, and the extension of government jurisdiction over professional activity should be undertaken only after careful planning for safeguards against abuse. Second, present licensure authorizes any health professional to perform all the various activities permitted to his profession. Third, many existing programs of continuing medical education, the report stated, are totally in-

adequate in both content and geographic distribution to serve as a basis for relicensing. New programs, it noted, would need to be developed and presented in ways which are tailored to the location and time requirements of busy practitioners. Fourth, if continuing education were to become a basis for relicensing, mechanisms would have to be developed to accredit these programs professionally. Fifth, the responsibilities of health professionals, including physicians, would have to be developed for those whose work did not permit reasonable participation in educational programs. The report notes finally, that the institution of such a relicensing requirement might have to be prospective and applied only to those who enter professional schools after the start of such a new requirement.

The Commission recommended (and this is the key to their thinking) that professional societies and state governments should explore the possibility of periodic relicensing of physicians and other health professionals. It recommended that relicensing should be granted either upon certification of acceptable performance in continuing education programs, or upon the basis of challenge examinations in the practitioner's specialty.

About one year ago, the Journal of the AMA carried an editorial on the subject of relicensing, physician competence, and continuing medical education. The editorial stated that there is general acceptance by physicians and the public that physicians in any field of medicine must strive to keep up-to-date. Some of the basic concepts that describe and distinguish a profession as being different from a trade or a technological skill involve the idea that a professional requires a lifetime of learning, and that members of a profession who possess a body of knowledge relating to that profession are obligated to teach others in the profession so that the people may be served better.

The editorial in JAMA noted that certain trends are now obvious in the field of continuing medical education and that these

trends seem to offer state licensing authorities better ways of helping the physician keep up-to-date.

Among these trends are certain bits of evidence that are worthy of mention here:

1. The support by the AMA House of Delegates for such ideas as periodic recertification by specialty boards, and documentation of continuing medical education activities as a condition for continued membership in state medical associations.
2. The establishment of the American Medical Association Physician's Recognition Award and its use cooperatively with similar programs by state medical associations as a means of documenting the continuing medical education activities of practicing physicians.
3. The greater availability of relevant continuing medical education activities and the steadily increasing number of these activities listed annually in The Journal and state medical journals.
4. The increasing numbers of state medical associations that have adopted continuing medical education programs of high quality.
5. The increasing use of peer review, utilization review, and medical audits as an educational tool for continuing medical education programs.
6. The increasing number of directors of medical education in hospitals who are concerning themselves with continuing medical education as a service to the practicing physicians in their area.
7. The increasing level of knowledge and skills that is developing in the field of continuing medical education.
8. The increasing availability and better utilization of electronic devices for continuing medical education, such as video tapes, radio networks, computers, and the telephone.

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9. Improved techniques for evaluating continuing medical education in terms of physician performance.
10. Serious consideration by state medical associations for making continuing medical education a condition for membership, and the adoption of such a policy by six state medical associations.
11. The outstanding program of the American Academy of Family Physicians as the only specialty organization requiring continuing medical education as a condition of membership.
12. The standard of the Joint Commission on Accreditation of Hospitals, which states in part that "the medical staff shall provide a continuing program of professional education, and give evidence of participation in such a program."

All of these trends have been sponsored and supported directly or indirectly by the medical profession rather than state licensing agencies. As they continue we can expect that they will be carefully watched and, where suitable, encouraged and supported by state licensing authorities. These trends constitute a broad and mostly voluntary program sponsored by the profession. It is probably true that the objectives of the licensing agencies and the profession, itself, are the same: to promote the science and art of medicine and the betterment of public health.

An important beginning was made in 1948 by the American Academy of General Practice in establishing a continuing medical education requirement for maintenance of membership. After a quarter of a century, the Academy (now the Academy of Family Physicians) has successfully maintained this program and has shown that continuing medical education is indeed a proper and effective function of a professional organization.

In 1968, the AMA Physician's Recognition Award was established along the lines of

the earlier program by the Academy of General Practice.

Several state medical societies and medical specialty societies are now involved in studying or planning programs to encourage and support continuing medical education and to document the accomplishments of their members. The California Medical Association has developed a voluntary program which requires a high level of participation as a qualification for the California certificate.

Medical news was made by the state medical associations of Oregon, Arizona, Pennsylvania, Massachusetts, New Jersey, and Florida when they decided to require continuing medical education as a condition for membership. The Pennsylvania Medical Society has adopted requirements identical to those of the Physician's Recognition Award of the AMA. The Arizona Medical Association has developed its requirements in close cooperation with the AMA Award program.

Added stimulus for documentation of continuing medical education is coming from state licensing boards. Recently passed permissive legislation, which was supported by the New Mexico Medical Society, provides for requiring of continuing medical education as a condition of reregistration of the license to practice medicine in New Mexico. The State Board of Medical Examiners has chosen to enforce this provision of the law and at present is establishing a program requiring 120 hours of continuing medical education every three years as a condition for relicensure. The New Mexico Medical Society, however, does not have and obviously does not need a continuing medical education requirement for maintenance of membership.

Legislation allowing state licensing agencies to require evidence of continuing medical education as a requirement for reregistration for the license to practice has been passed also in Kansas and Maryland. The law has been on the books in Kansas since 1969, but has not yet been enforced. In

Maryland, however, we have been advised informally that the requirement will be put into effect as soon as possible.

Since continuing medical education is becoming so important not only to physicians, but to state and federal governments as well as the public, a brief review of the quality of continuing medical education is important.

As the President's Manpower Commission report noted, the geographic availability of relevant continuing medical education is not always satisfactory. Today we are noticing new trends which should help to improve the quality of continuing medical education.

Better input from physicians who are potential students in these continuing education programs is becoming more available. Specialty society experts on both the teaching and the learning sides are playing a bigger role, and there is more input from voluntary health organizations. Medical school faculties are reaching out more than ever, seeking ways and means to improve the relevance and availability of continuing medical education offerings.

A force of increasing value is the accreditation mechanism which seeks to improve the standards of continuing medical education programs and to serve as a consultative means for doing so.

Accreditation has been an important force in American higher education. The voluntary system of accreditation in the United States is unique in the world today. It has been developed in line with the traditional independence and initiative which has so often determined the growth and structure of many American enterprises. Most of us are familiar with the accreditation of medical schools carried out by the Liaison Committee on Medical Education. This Committee is a joint project of the AMA Council on Medical Education and the AAMC Executive Council. It started out as a purely voluntary system of accreditation shortly after the Flexner report was published in 1910. It was not long before the public, various gov-

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ernmental agencies, and various boards of licensure began to use the certification provided by accreditation as a basis for their own authorization of medical school operations. Today, it is a sine qua non for every medical school. It would probably be impossible for a non-accredited medical school to exist and it would be unthinkable for a new school to begin without every assurance that it would ultimately secure accreditation.

In graduate medical education (i.e., internships and residencies), accreditation developed in a similar manner, beginning in 1912. Gradually over a period of years, accreditation in this field also has taken on more importance and greater leverage.

Accreditation of continuing medical education has developed in relatively recent years. In 1961, the AMA Council on Medical Education established a permanent standing committee as a successor to an earlier ad hoc committee on continuing medical education. This committee and its predecessor were charged with exploring the problems of continuing medical education. It recognized that a feasibility study for accreditation in the field of continuing medical education was desirable.

This feasibility study was carried out about ten years ago and set the pattern for future accreditation reviews. At this time, well over 200 institutions and organizations have been surveyed and accredited for their continuing medical education programs. The major part of this survey activity has been carried out in the past five years. Developing from this has been a set of guidelines now called "The Essentials of Approved Programs in Continuing Medical Education". Many planners and programmers of continuing medical education programs utilize the Essentials and survey teams, themselves, employ them most carefully.

For sometime, in the past two years, it had been noted that increasing numbers of community hospitals were interested in seeking a survey for accreditation. The AMA Advisory Committee on Continuing Medical

Education and the AMA Council on Medical Education expressed the belief that state medical associations would have a logical interest in setting up their own accreditation programs focused on these community hospitals and other local organizations. It was felt that most such community hospital continuing medical education programs, largely directed at their own staffs and physicians in the nearby communities, would be served best by state level accreditation and ordinarily would not apply for accreditation at a national level.

In addition, it was becoming logistically difficult to arrange for the growing number of surveys requested by the community hospitals and other local institutions and organizations.

The AMA Council on Medical Education in June 1971 established a policy so that, through its Advisory Committee and staff, it will consider for survey for accreditation the following categories of institutions and organizations:

1. Medical schools and their teaching hospitals affiliated for their continuing medical education programs.
2. Medical organizations of national scope such as the specialty societies.
3. The national voluntary health agencies such as the American Heart Association and the American Cancer Society.
4. Institutions and organizations including hospitals which produce programs of continuing medical education of large regional influence attracting physicians from a good many states.
5. Other organizations of national or multistate scope.

At the same time, the AMA Council on Medical Education hopes strongly to encourage state medical associations to consider the establishment of accreditation programs for the local institutions. These state level accreditation programs would be ini-

ASSOCIATION FORUM

tially approved by and periodically reviewed by the AMA Council on Medical Education, through its Advisory Committee on Continuing Medical Education. The state medical associations adopting such programs would carry out surveys for accreditation of local hospitals where continuing medical education is primarily aimed at the hospital staff and physicians in the local community. It would also include surveys of medical organizations which do not have national or large regional scope. This could include state or county level institutions and organizations. In addition, local units of voluntary health agencies which are not under national administration would be eligible for state level survey for accreditation. At this point, 31 state medical associations have indicated a strong interest in setting up their own accreditation programs for continuing medical education at intrastate institutions and organizations. Five of these state medical associations already have had preliminary approval of their programs and one of them has been implementing its program for about one and a half years.

In this latter case, the California Medical Association has found a high degree of interest on the part of community hospitals desiring surveys. The state association, in this instance, has also been able to organize workshops to help teach community hospital directors of medical education how to plan and produce high quality continuing medical education.

A big feature of accreditation at the state level is that once it is suitably implemented, most physicians in such a state will be able to secure recognized good quality continuing medical education at their own hospitals, solving their own patients' problems, and at a pace which they can tolerate.

Another fringe benefit of such an accreditation program is that the state society accreditation program can have much greater meaning for the community hospital than a national accreditation program would have. Better opportunities would exist for the

(Continued on Page 294)



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Warnings: If hypersensitivity reactions occur, drug should be discontinued immediately and not resumed. Rarely, erythema multiforme has been associated with thiabendazole therapy; in severe cases (Stevens-Johnson syndrome), fatalities have occurred. Because CNS side effects may occur quite frequently, activities requiring mental alertness should be avoided. Safe use in pregnancy or lactation has not been established.

Precautions: Ideally, supportive therapy is indicated for anemic, dehydrated, or malnourished patients prior to initiation of anthelmintic therapy. In presence of hepatic or renal dysfunction,

patients should be carefully monitored.

Adverse Reactions: Most frequently encountered are anorexia, nausea, vomiting, and dizziness. Less frequently, diarrhea, epigastric distress, pruritus, weariness, drowsiness, giddiness and headache have occurred. Rarely, tinnitus, hyperirritability, numbness, abnormal sensation in eyes, blurring of vision, xanthopsia; hypotension, collapse; enuresis; transient rise in cephalin flocculation and SGOT; perianal rash, cholestasis and parenchymal liver damage; hyperglycemia; transient leukopenia; malodor of the urine, crystalluria, hematuria; appearance of *Ascaris* in the mouth and nose. Hypersensitivity reactions

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MINTEZOL should be given after meals if possible. Dietary restriction, complementary medications, and cleansing enemas are not needed.

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Weight-dose chart:

WEIGHT (lb)	EACH DOSE (g)	TABLETS
25	0.25	½
50	0.5	1
75	0.75	1½
100	1.0	2
125	1.25	2½
150 & over	1.5	3

The regimen for each indication follows:

INDICATION	REGIMEN	COMMENTS
Pinworm disease	Two doses per day for 1 day. Repeat in 7 days. This regimen is designed to reduce the risk of reinfection.	If this is not practical, give 2 doses per day for 2 successive days.
Threadworm,* large roundworm,* hookworm,* and whipworm* disease	Two doses per day for 2 successive days.	A single dose of 20 mg/lb or 50 mg/kg may be employed as an alternative schedule, but a higher incidence of side effects should be expected.
Creeping eruption	Two doses per day for 2 successive days.	If active lesions are still present 2 days after completion of therapy, a second course is recommended.
Symptoms of trichinosis* during the invasive phase of the disease	Two doses per day for 2 to 4 successive days according to the response of the patient.	The optimal dosage for the treatment of trichinosis has not been established.

*Clinical experience with thiabendazole for treatment of each of these conditions in children weighing less than 30 lb has been limited.



Round and round she goes
and where she stops...

Antivert[®] (meclizine HCl) for vertigo*

Indicated in the management of nausea, vomiting and dizziness associated with motion sickness.

Found useful in the management of vertigo associated with diseases affecting the vestibular system.

Available as Antivert[®] (12.5 mg. meclizine HCl) blue and white scored tablets and also Antivert[®]/25 (25 mg. meclizine HCl) yellow and white scored tablets.

INDICATIONS. Based on a review of this drug by the National Academy of Sciences-National Research Council and/or other information, FDA has classified the indications as follows:

Effective: Management of nausea and vomiting and dizziness associated with motion sickness.

Possibly Effective: Management of vertigo associated with diseases affecting the vestibular system.

Final classification of the less than effective indications requires further investigation.

CONTRAINDICATIONS. Administration of Antivert during pregnancy or to women who may become pregnant is contraindicated in view of the teratogenic effect of the drug in rats.

The administration of meclizine to pregnant rats during the 12th-15th day of gestation has produced cleft palate in the offspring. Limited studies using doses of over 100 mg./kg./day in rabbits and 10 mg./kg./day in pigs and monkeys did not show cleft palate. Congeners of meclizine have caused cleft palate in species other than the rat.

Meclizine HCl is contraindicated in individuals who have shown a previous hypersensitivity to it.

WARNINGS. Since drowsiness may, on occasion, occur with use of this drug, patients should be warned of this possibility and cautioned against driving a car or operating dangerous machinery.

Usage in Children: Clinical studies establishing safety and effectiveness in children have not been done; therefore, usage is not recommended in the pediatric age group.

Usage in Pregnancy: See "Contraindications."

ADVERSE REACTIONS. Drowsiness, dry mouth and, on rare occasions, blurred vision have been reported.

ROERIG 

A division of Pfizer Pharmaceuticals
New York, New York 10017

(Continued from Page 289)

state medical association to act as a coordinator of all of the continuing medical education within the state.

Questions may arise as to whether such a state association program would cost much in terms of time, money, and personnel. It is our experience that this need not be so. The surveyors in our own program are unpaid volunteers. They are individuals who plan and implement their own continuing medical education programs. In this sense, they are performing a peer review of other institutions and organizations in a consultative way. The state-level program, itself, would be voluntary, awaiting the desire of the community hospital to be surveyed for accreditation. It would in no sense be punitive, but rather an effort to assist community hospitals and other local organizations to plan and produce good programs of continuing medical education. The medical schools in any state, if they exist, would relate directly through the state association to the community hospitals. It would be a two-way street, with the medical school learning much about the practice of medicine outside the medical school walls, and the practicing profession, in turn, learning much of the newer knowledge and skills existent within the medical school.

Once a state medical association decides to proceed with its own program of accreditation for institutions of local scope and focus, it would prepare its documents to support the program. These would consist of a document of Essentials equivalent to our own at the AMA, but more relevant for the community hospital. A presurvey questionnaire similar to the one used by the AMA would also be prepared and a third document called the team report form or content list would also be prepared. Model documents approved by the AMA Council are already in existence and can readily be adapted to any state medical association's needs. The state association plan with its documents is then presented to the AMA Advisory Committee for its review, and then

to the AMA Council on Medical Education for its approval. It has been customary for the state association plan and documents to receive provisional approval for one year. During this time of provisional approval, the state society can carry out several surveys, using the help and advice of an AMA staff individual plus an Advisory Committee member on one or two of its early surveys. Similar individuals can also help by being present at an early review session of the state society's accrediting body. Following one year of implementation, the AMA staff, using a progress report from the state society, can complete a report on the state society's accreditation activities during its first year. At this point, the AMA Advisory Committee and Council would consider the state accreditation program for more prolonged approval, probably for three or four years.

Physicians in practice like to have knowledge that they will receive credit for participation in good continuing medical education. The state society can give some assurance of this by conducting its own accreditation program. Membership ties can become stronger and state associations can better fulfill their rolls of serving their memberships and the patients whom its members care for.

The main thing is to get a working system established. You need not ask the Legislature for relicensure. You can reach almost all of your State doctors through an accrediting program for hospitals.

Eventually, many people expect that 80% of continuing education will occur in hospitals—just the reverse of today.

The State Association can make its own rules, and I wish to stress this, on the basis of the principles of the AMA essentials.

The Board of Licensure will probably wish the State Association to do any standard setting. It's up to you to help them.

At this point, I would mention the particularly fine efforts your state has made

(Continued on Page 301)

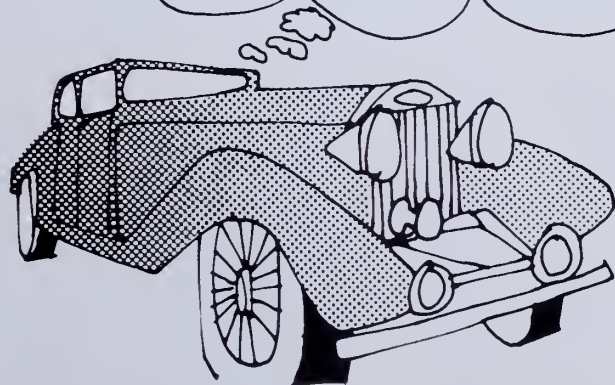
YOU KNOW... I REALLY HATE TO PUT UP ALL THAT CASH AGAIN FOR A NEW CAR. I COULD INVEST THAT MONEY AT A PROFIT. MAYBE I SHOULD LEASE MY NEXT CAR. I THINK I'LL DROP EQUITABLE LEASING CORPORATION A LINE FOR SOME FURTHER INFORMATION ABOUT THIS SORT OF THING. I HAVE THEIR FINANCIAL CONSULTANT'S CARD HERE SOMEWHERE IN THE GLOVE COMPARTMENT...

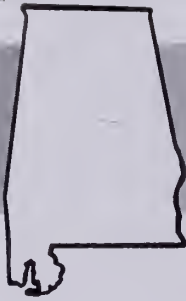
AH, HERE IT IS.

LEE FROELICH, EQUITABLE LEASING CORPORATION,
FIRST NATIONAL SOUTHERN NATURAL BUILDING,
BIRMINGHAM, ALA. 35200

AND MAYBE WHILE THEY'RE AT IT THEY CAN
SHOW ME THE ADVANTAGES OF LEASING
EQUIPMENT FOR MY OFFICE.

LET'S SEE... LEE'S PHONE NUMBER IS
(205) 323-2578





around the state

Vital Statistics

NEW MEMBERS

Dallas County

Sapp, Gerald Lamont, b '37, mc Georgia '65, recip. Georgia '72, 104 Lori Lane, Selma, Alabama 36701. Or.

Jefferson County

Adams, John Goldthwaite, Jr., b '28, mc U. Vermont '54, recip. NBME '71, 1601 6th Ave., South, Birmingham, Alabama 35233. Anes.

Arrowsmith, David Rankin, b '42, mc Tulane U. '67, recip. La. '71, 1919 7th Avenue South, Birmingham, Alabama 35233. D- (Resident).

Carter, James Roland, b '42, mc U. Tennessee '70, recip. Tennessee '71, 619 South 19th Street, Birmingham, Alabama 35233. Anes.

Daugherty, Manuel Preston, Jr., b '39, mc U. Ala. '65, sb '66, 1919 7th Avenue South, Birmingham, Alabama 35233. Or.

Dismukes, William Earnest, b '39, mc U. Ala. '65, sb '66, 1919 7th Ave., South, Birmingham, Alabama 35233. I.

Donald, Thomas Towey, b '40, mc U. Ala. '65, sb '66, 1316 19th St., South, Birmingham, Alabama 35205. S (General & Vascular).

Gergen, John Andrew, b '32, mc Harvard '57, recip. N.C. '72, 1919 7th Ave., South, Birmingham, Alabama 35233. P.

Harris, Richard Rex, b '39, mc U. Ala. '65, sb '66, Medical Arts Building, Birmingham, Alabama 35205. Or.

Johnson, Leslie Donald, b '42, mc Bowman

Gray '69, recip. N.C. '71, 1500 6th Ave South, Birmingham, Alabama 35233. D.

Keith, Ward Andrew, b 40, mc U. Ala. '68 sb '69, 1100 Bankhead Highway, Graysville Alabama 35073. GP.

Kerr, Carole Stevenson, b '42, mc West Virginia '67, recip. W.V. '71, 1919 7th Ave South, Birmingham, Alabama 35233. Anes

Lee, James Monroe, b '41, mc U. Ala. '67, sb '68, 619 19th Street, South, Birmingham Alabama 35205. P.

Leitner, William Aull, b '35, mc U. Ala. '64 sb '65, 3041 Stuart Dr., Macon, Georgia 31204. U.

McInnis, Cecil Rush, Jr., b '41, mc U. Ala. '67, sb '69, 1100 Bankhead Highway, Graysville, Alabama 35073. GP.

Moore, Ernest Griffin, Jr., b '38, mc U. Ala. '66, sb '67, 2700 10th Ave. South, Birmingham, Alabama 35205. ObG.

Owens, William Franklin, Jr., b '29, mc Tulane '54, recip. Li. '57, Lloyd Nolans Hospital, Fairfield, Alabama 35064. Or.

Lauderdale County

Chappell, Seaborn Miller, b '38, mc U. Ala. '63, sb '64, 120 S. Locust St., Florence, Alabama 35630. ObG.

Lee County

Copeland, Arthur Joel, Jr., b '36, mc Emory U. '68, recip. Georgia '72, P. O. Box 568 Auburn, Alabama 36830. R.

(Continued on Page 299)



**Pink isn't exactly his color,
but he loves it for a change.**

WinGel[®]

aluminum-magnesium hydroxides
mint-flavored antacid liquid and tablets

For your ulcer and ulcer-prone patients...
a refreshing break from the
boring sameness of white antacids.

- pleasing mint flavor
- non-gritty texture
- formulated to avoid
constipation and laxation

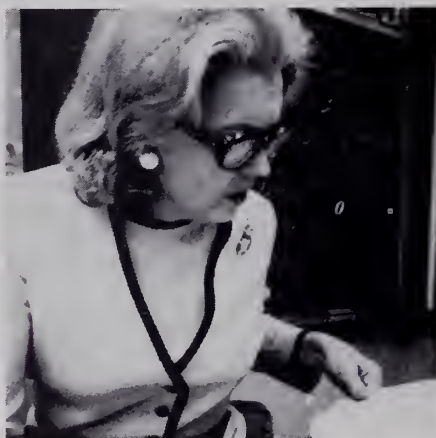


Winthrop

WINTHROP LABORATORIES
NEW YORK, N.Y. 10016

Literary Hemorrhoids

Mrs. S.R., 47, high school English teacher. A history of anorectal pain and burning of several years' duration. On and off weight reducing diets, the insufficient bulk of which has aggravated a chronic constipation problem. Subsequent straining at stool has precipitated an acute episode of internal-external hemorrhoids.



a typical
proctological
patient

to help
relieve the pain,
itching,
burning associate
with this and
similar anorectal
conditions

prescribe

Anusol
HC[®] hemorrhoid
suppositories
with hydrocortisone
acetate

Each suppository contains hydrocortisone acetate 10 mg, bismuth subgallate 2.25%, bismuth resorcin compound 1.75%, benzyl benzoate 1.2%, Peruvian balsam 1.8%, zinc oxide 11.0%, and boric acid 5.0%, plus the following inactive ingredients: bismuth subiodide, calcium phosphate, and coloring in a bland hydrogenated vegetable oil base.

Precaution Prolonged or excessive use of Anusol-HC might produce systemic corticosteroid effects. Symptomatic relief should not delay definitive diagnosis or treatment.

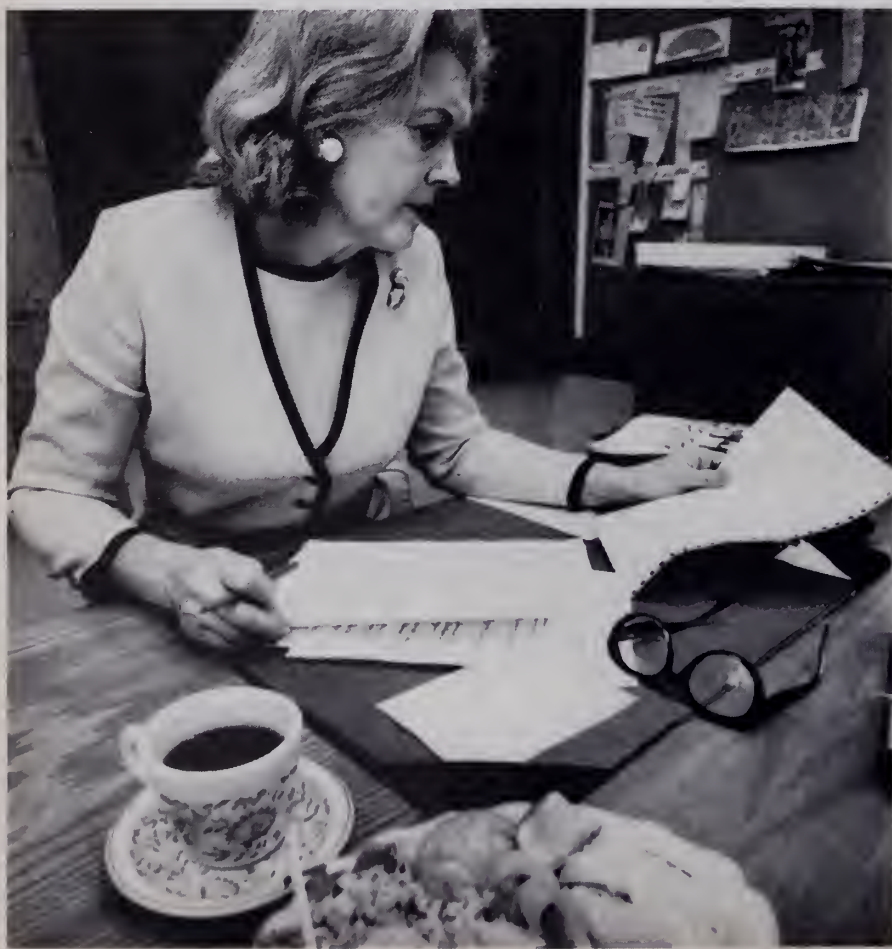
Dosage and Administration Anusol-HC: One suppository in the morning and one at bedtime for 3 to 6 days or until the inflammation subsides. Regular Anusol: One suppository in the morning, one at bedtime and one immediately following each evacuation.

And for long-term
patient comfort...recommend
Anusol[®] hemorrhoidal
suppositories.

Each suppository contains
the ingredients of
Anusol-HC without the
hydrocortisone.



Warner-Chilcott
Division, Warner-Lambert Company
Morris Plains, New Jersey 07950
ANGP-23 Rev.



AROUND THE STATE

(Continued from Page 296)

Pike County

Brantley, James Coleman, b '40, mc Tulane '66, recip. Georgia '69, 317 Murphree St., Troy, Alabama 36081. I.

St. Clair County

Grant, Larry Wells, b '43, mc U. Ala. '69, NB '70, 508 Martin St., P. O. Box 688, Pell City, Alabama 35125. GP.

Tallapoosa County

Stimson, Joseph Richard, b '41, mc U. Ala. '66, sb '67, Medical Arts Bldg., Suite 5, Alexander City, Alabama 35010. ObG.

MEMBERS DECEASED

Jefferson County

Caldwell, Harry Edwin, Birmingham, Alabama, Deceased 7/72.

Stabler, A. L., Birmingham, Alabama, Deceased 12/24/71.

Lee County

Sims, Dorsey Taylor, Auburn, Alabama, Deceased 8/15/72.

Tuscaloosa County

Oliver, John Thomason, Tuscaloosa, Alabama, Deceased 8/72.

CHANGES OF ADDRESS

Calhoun County

Crawford, Samuel J., present Anniston to 822 Leighton Ave., P. O. Box 2142, Anniston, Alabama 36201.

Clarke County

DeShazo, W. F., present Jackson to University Health Center, P. O. Box Y, University of Alabama, University, Alabama 35486.

Colbert County

Wayland, James L., present Sheffield to 401 West College St., Florence, Alabama 35630.

Internist or General Practitioner required immediately to associate with outpatient group at Birmingham, Alabama, VA Hospital, a Dean's Committee hospital. According to abilities may be involved in developing new concepts of care for ambulatory care patients, sub-physician performance of routine examinations, and a new program of screening and treatment for hypertensive patients. Possibility for interaction with academic service. Salary up to \$31,554, commensurate with training and experience, plus full Civil Service benefits. Contact or write:

**Eugene C. Clark, M. D.
Chief, Outpatient Service
700 South 19th Street
Birmingham, Al. 35233**

An Equal Opportunity Employer.

AROUND THE STATE

Jefferson County

Allen, Thomas H., present Birmingham to 1717 11th Ave. South, Suite 505, Birmingham, Alabama 35205.

Dahlene, Oscar, Jr., present Birmingham to 1901-14th Ave. South, Birmingham, Alabama 35205.

Lindsey, James D., present Birmingham to 2930-12th Ave. North, Birmingham, Alabama 35234.

Mathews, Robert D., present Newport News, Virginia to 1540 Walnut Hill Circle, Birmingham, Alabama 35234.

Samuels, Joseph W., Jr., present Birmingham to 1515-6th Ave. South, Birmingham, Alabama 35233.

Yake, Ronald F., present Birmingham to % Mr. Herbert Yake, Rt. 8, Huntington, Indiana 46750.

Lamar County

Box, William C., present Birmingham to 1701 North 25th St., Apt. 203, Birmingham, Alabama 35234.

Macon County

Norris, James E. C., present Tuskegee to 2161 Stone Rd., Northwood 5, Ann Arbor, Michigan 48104.

Madison County

Huckaby, Grady B., present Huntsville to 107 Governors Dr., Huntsville, Alabama 35801.

Marshall County

Smith, Braxton F., present Arab to 142 South Main St., Arab, Alabama 35016.

Mobile County

Martin, Henry F., present Point Clear, Alabama to 319 Plantation Rd., Perry, Florida 32347.

Wiley, Homer P., present Mobile to 201 Cox St., Mobile, Alabama 36604.

Montgomery County

Frazer, David H., Jr., present Montgomery to Suite 331, 2119 E. South Blvd., Montgomery, Alabama 36111.

Morgan County

Hawkins, Rowland D., present Decatur to 2415 Quince Dr., S. E., Decatur, Alabama 35601.

Oliver, Robert K., present Tallahassee, Florida to 1204 Miccosukee Rd., Tallahassee, Florida 32303.

Pike County

Brantley, James A., present Troy to 318 West Walnut St., Troy, Alabama 36081.

Sacks, Herman M., present Troy to 1201 University Highway S., Troy, Alabama 36081.

Stewart, William P., present Troy to 315 West Walnut St., Troy, Alabama 36081.

Talladega County

Terry, Lucius L., present Sylacauga to 201 South Norton, Sylacauga, Alabama 35150.

Tuscaloosa County

Bane, Denis M., present Columbus AFB, Mississippi to Route 6, Danville, Pennsylvania 17821.

Drynan, James R., present Columbus, Mississippi to 414-West 4th St., Anaconda, Montana 59711.

Hensle, Terry W., present Columbus AFB, Mississippi to 1440 West Woodmen Rd., Colorado Springs, Colorado 80907.

Walker County

Ferrell, Thaddeus H., present Jasper to 1105 7th Ave., North, P. O. Box 1389, Jasper, Alabama 35501.

Mayfield, William C., Jr., present Jasper to 1105 7th Ave., North, P. O. Box 1389, Jasper, Alabama 35501.

Ray, Robert E., present Jasper to 1105 7th Ave., North, P. O. Box 1389, Jasper, Alabama 35501.

Scarbrough, Daniel M., present Jasper to 1105 7th Ave., North, P. O. Box 1389, Jasper, Alabama 35501.

Weil, Warren B., present Jasper to 1105 7th Ave., North, P. O. Box 1389, Jasper, Alabama 35501.

NEW TELEPHONE NUMBERS

Adams, John G., Jr., Jefferson	871-6746
Arrowsmith, D. R., Jefferson	822-5116
Brantley, J. C., Pike	566-3580
Carter, J. R., Jefferson	591-1305
Chappell, S. M., Lauderdale	764-5532
Copeland, A. J., Jr., Lee	821-3713
Daugherty, M. P., Jr., Jefferson	
DeShazo, W. F., Clarke	348-6262
Dismukes, W. E., Jefferson	871-7614
Donald, T. T., Jefferson	870-1647
Dozier, Slater M., Etowah	547-0536
Frazer, D. H., Jr., Montgomery	281-3920
Gergen, J. A., Jefferson	934-4011
Grant, L. W., St. Clair	
Harris, R. R., Jefferson	328-1458
Hobbs, R. J., Jefferson	933-7861
Hufstedler, J. G., Lauderdale	757-4868
James, T. N., Jefferson	934-4621
Johnson, L. D., Jefferson	933-7018
Keith, W. A., Jefferson	674-9422
Kerr, C. S., Jefferson	934-4696
Lee, J. M., Jefferson	934-4011
Leitner, W. A., Jefferson	
Mathews, R. D., Jefferson	878-5002
McInnis, C. R., Jr., Jefferson	674-9422
Moore, E. G., Jr., Jefferson	933-8532
Owens, W. F., Jr., Jefferson	785-2121
Sapp, G. L., Dallas	875-9281
Sherrill, J. D., Jr., Jefferson	933-7861
Stimson, J. R., Tallapoosa	
Tune, L. J., Morgan	355-5315

MEMBERS TRANSFERRED

Baldwin County

Norton, Thomas B., 9 Sunset Boulevard, Gulf Shores, Alabama 36542, from member Sumter County Medical Society to member of Baldwin County Medical Society. GP-ObG.

CHANGE OF OFFICERS

Lee County

B. S. Knapp, Auburn, Secretary-Treasurer. (Retired)
W. B. Turk, Auburn, Secretary-Treasurer.
J. C. Thoroughman, Auburn, Member of Board of Censors. (Deceased)
E. F. Wright, Jr., Opelika, Member of Board of Censors.

CONTINUING MEDICAL EDUCATION

(Continued from Page 294)

in continuing medical education. You have blended the talents of your medical association, your medical school and the regional medical program. You have one of the most successful outreach programs in MIST, which has been copied in other parts of the country, with strong credit given to yourselves. You have publicized your efforts well. Now you will need to secure continuing financial support to keep it all going. If the sources of these potential funds realize what a fine job you have done, and that helping doctors keep up-to-date, so the patients can continue to receive the best possible care; if they understand how closely related competent doctors are to high quality health care, . . . then I believe you will get the support you need. What you are doing is for the public good.

In conclusion, I would like to pay a strong compliment to Dr. Margaret Klapper and her colleagues on the Committee on Medical Education, as well as to the many leaders in medicine and medical education in the state of Alabama. You have attracted to your state, to your Association, and to your medical school system some of the finest Americans in medicine. They are a credit to the entire profession.

New Physicians Licensed to Practice in Alabama



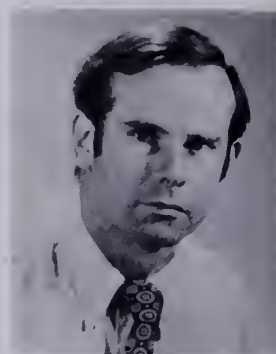
Lynn Brown Boyer,
M. D.
Huntsville



Harold Treat Cafferata,
M. D.
Jacksonville



Alexander Robert
Lawton, III, M. D.
Birmingham



William Michael
Pitman, M. D.
Birmingham



Guenter Corssen,
M. D.
Birmingham



David W. Darden,
M. D.
Birmingham



Krieng Kri Ratanaubol,
M. D.
Birmingham



Robert Peter Rosier,
M. D.
Birmingham



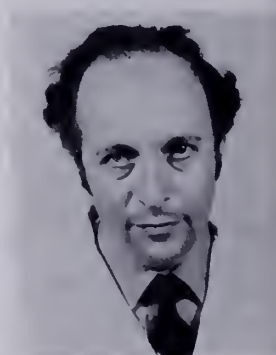
Charles Pattison
Graham, Jr., M. D.
Ft. Rucker



Haywood Northrop
Hill, Jr., M. D.
Birmingham



Bernard Schencker,
M. D.
Birmingham



Bruce Maxwell Schlein,
M. D.
Birmingham



Warren David Jacobs,
M. D.
Ft. Benning




Ralph Jacques Lampert,
M. D.
Huntsville



Bruce Carlton Stoesser,
M. D.
Pensacola



Thomas Harris Wyatt,
M. D.
Ft. Rucker



**if skin is infected,
or open to infection...
choose the topical
that gives your patient—**

broad antibacterial activity against
susceptible skin invaders
low allergenic risk—prompt clinical response

Special Petrolatum Base
Neosporin[®] Ointment
(polymyxin B-bacitracin-neomycin)

Each gram contains: Aerosporin[®] brand Polymyxin B Sulfate, 5000 units;
zinc bacitracin, 400 units; neomycin sulfate, 5 mg. (equivalent to 3.5 mg.
neomycin base); special white petrolatum q. s.
In tubes of 1 oz. and ½ oz. for topical use only.

NEOSPORIN for topical infections due to susceptible organisms, as in
impetigo, surgical aftercare, and pyogenic dermatoses.

Precaution: As with other antibiotic preparations, prolonged use may
result in overgrowth of nonsusceptible organisms and/or fungi. Appropriate
measures should be taken if this occurs. Articles in the current medical
literature indicate an increase in the prevalence of persons allergic to
neomycin. The possibility of such a reaction should be borne in mind.

Contraindications: Not for use in the external ear canal if the eardrum is
perforated. This product is contraindicated in those individuals who
have shown hypersensitivity to any of its components.

Complete literature available on request from Professional Services Dept. PML.

When irritable colon feels like this



...in the presence of spasm or hypermotility, gas distention and discomfort, **KINESED®** provides more complete relief:

- ☐ belladonna alkaloids—for the hyperactive bowel
- ☐ simethicone—for accompanying distention and pain due to gas
- ☐ phenobarbital—for associated anxiety and tension

Contraindications: Hypersensitivity to barbiturates or belladonna alkaloids, glaucoma, advanced renal or hepatic disease.

Precautions: Administer with caution to patients with incipient glaucoma, bladder neck obstruction or urinary bladder atony. Prolonged use of barbiturates may be habit-forming.

Side effects: Blurred vision, dry mouth, dysuria, and other

atropine-like side effects may occur at high doses, but are only rarely noted at recommended dosages.

Dosage: *Adults:* One or two tablets three or four times daily. Dosage can be adjusted depending on diagnosis and severity of symptoms.

Children 2 to 12 years: One-half or one tablet three or four times daily. Tablets may be chewed or swallowed with liquids.



STUART PHARMACEUTICALS | Division of ICI America Inc. | Wilmington, Del. 19899 | Pasadena, Calif. 91109

(from the Greek *kinetikos*,
to move,
and the Latin *sedatus*,
to calm)

KINESED®

antispasmodic/sedative/antiflatulent

Each *chewable tablet* contains: 16 mg. phenobarbital (warning: may be habit-forming); 0.1 mg. hyoscyamine sulfate; 0.02 mg. atropine sulfate; 0.007 mg. scopolamine hydrobromide; 40 mg. simethicone.

Chuckwalla (*Sauromalus obesus*):
This southwestern desert lizard seeks
shelter in crevices of rocks.
When attempts are made to probe him
from his niche, he gulps air
until his torso is distended up to
sixty per cent over its normal size...
thus wedging himself tightly
in place and preventing capture.

PHYSICIAN PLACEMENT SERVICE IN ALABAMA

The Physician Placement Service of the Medical Association of the State of Alabama is designed to assist both physicians and communities. MASA members having knowledge of practice opportunities or wishing to relocate their own practices are urged to communicate with the Placement Service. For further information: write Mr. Emmett Wyatt, Executive Assistant, Medical Association of the State of Alabama, 19 South Jackson Street, Montgomery, Alabama 36104, or Telephone 263-6441.

Locations Wanted

General Practice—

Age 27; Univ. of Tennessee, 1970; seeking group practice; Available July 1973. LW-3/1

Age 31; University of Kansas, 1966; seeking associate or group practice; Available July 1973. LW-3/2

Age 32; University of Texas, Southwestern, 1968; seeking institutional practice; Available January 1973. LW-3/3

Age 41; Temple University, 1963; National Board; Board eligible; seeking associate or group practice; Available December 1972. LW-3/4

Age 45; Medical School of Iowa, 1956; Board certified; seeking associate, group, industrial, institutional practice or emergency room, student health - teaching family practice; Available September 1, 1972. LW-3/6

Age 45; University of Alabama, 1963; Available July 1973. LW-3/9

Internal Medicine—

Age 31; University of Miami, 1964; Board certified, seeking group or institutional practice. Available January 1973. LW-4/7

Age 33; Cornell University, 1966; National Board; Board certified; seeking assistant or associate practice. LW-4/14

Age 30; Univ. of Virginia, 1967; Board eligible; seeking group practice; Available June 30, 1973. LW-4/15

Age 30; Vanderbilt University, 1967; National Board; Board eligible; seeking solo, associate, or group practice; Available July, 1973. LW-4/16

Age 34; Georgetown University, 1964; Board certified; seeking group, associate or institutional practice; Available July 1973. LW-4/18

Age 40; University of Kentucky, 1969; Board eligible; seeking solo, associate, group or institutional practice; Available July 1973. LW-4/19

Neurology

Age 30; Northwestern University, 1967; National Board; Board eligible; seeking solo, associate, or group practice; Available June 1973. LW-5/1

Obstetrics-Gynecology—

Age 49; Marquette University, 1945; Board certified; seeking institutional practice. LW-15/1

Age 57; Marquette University, 1943; Board certified; seeking industrial, institutional or clinical practice. LW-15/2

Ophthalmology—

Age 31; Chicago Medical School, 1966; National Board; seeking associate or group practice; Available July, 1973. LW-6/6

Age 42; George Washington University, 1959; National Board; Board certified; seeking group or institutional practice; Available 1972. LW-6/8

Orthopedic Surgery—

Age 31; University of Alabama, 1966; National Board; Available July, 1973. LW-14/4

Age 31; Baylor, 1966; Board eligible; seeking associate practice; available July, 1973. LW-14/5

Age 30; University of Illinois, 1967; Board eligible; seeking group or associate practice; Available June 1974. LW-14/8

Age 38; Loyola University, 1959; Board eligible; seeking solo or associate practice; Available December 1972. LW-14/9

Pathology—

Age 32; Bowman Gray School of Medicine, 1965; Board certified; seeking Hospital practice with or without associate. LW-8/12

Otolaryngology—

Age 32; Tulane University Medical School, 1965; Board certified; seeking solo, associate, or group practice; Available September 1, 1972. LW-16/2

Radiology—

Age 31; University of Iowa, 1966; seeking assistant or associate practice; Available October 1, 1972. LW-10/8

Age 32; Louisiana State, 1966; Available September 1, 1972. LW-10/9

Age 43; Univ. of Tennessee, 1962; Available July 1, 1973. LW-10/10

Age 33; Univ. of Kentucky, 1966; Board eligible; seeking solo, associate, or group practice; Available November, 1972. LW-10/11

Surgery—

Age 33; University of Maryland, 1965; seeking solo, group, or associate practice; Available July 1973. LW-11/7

Age 35; Univ. of Oklahoma, 1964; Board eligible; seeking associate or group practice; Available Jan. 1, 1973. LW-11/14

Urology—

Age 36; Louisiana State University Medical School, 1961; Board eligible; seeking associate practice; Available December, 1972. LW-12/4

Age 35; Univ. of Miami, 1964; National Board; Board eligible; seeking associate, group, or institutional practice; Available Jan. 1973. LW-12/5



Physicians Wanted

Special Openings—

Wanted, qualified physicians in either OB-GYN, Internal Medicine, or Thoracic Vascular Surgery, to practice with group clinic. The clinic is a 16 man multi-specialty group, and is located in a city of 35,000 with a trade area of 160,000. Excellent recreational facilities and educational opportunities in the area. PW-14

Opportunity for Internist, Board Certified or eligible, interested in Cardiology, in town of 11,000 population—service area 40,000—south Alabama. Modern 86-Bed (JCAH) general hospital with 8-Bed Combination Intensive and Coronary Care Unit under construction. Seven GP's, Certified Surgeon, Radiologist—excellent city school system. PW-15

Internists—one or two needed in University town of 40,000 plus population in Southeast Alabama—Young vigorous multi-specialty group—Generous initial salary and early partnership. PW-16

Internists, Board-certified or eligible. One needed now and another in 1 or 2 years. For early partnership with internist in south Alabama city of 40,000 plus population. New office building adjacent to 181-bed hospital. Practice largely hospital in-patient and Cardiology. PW-21

Opportunity for a Board certified or eligible surgeon to be associated with a Board surgeon in city of 150,000 population. PW-21/1

General Practitioner or Internist for associate or separate practice in Birmingham. Modern office space and excellent hospital facilities. PW-26

Internist wanted, Board certified, Town of 10,000 population, Southwest Alabama. New 51-bed general hospital, I.C.U. Physicians: 5 GP's, Certified Surgeon and Radiologist. Within easy access, excellent fresh and salt water fishing, hunting including deer and turkey. Public and

private schools. One hour drive from two metropolitan areas. PW-18

Wanted, internists, generalists, radiologist, orthopedist, general surgeons, town of 15,000 population in county of 45,000 population in southeast Alabama. Attractive for a group setup. High income area and marked scarcity of physicians. Excellent schools and recreational facilities. Newly expanded hospital. PW-17

Wanted: Immediately. Pediatrician to replace recently deceased partner in northeast Alabama. Enter busy practice in a predominantly GP area. Enjoy rural, quiet living with nearby scenic and recreational facilities. Salary, practice, everything negotiable. PW-19

Wanted: General Practitioner or Internist to join active 4-M. D. professional association—3-GP's, 1 Board Surgeon. Modern offices, accredited 75 bed hospital. Beautiful town of 10,000 with excellent churches, schools (public and private). Salary for 3-6 months then arrangement for full partnership. PW-22

General Practitioners—

For town of 2,000 population located in trade area of 15,000 population in northeast Alabama. Nearest metropolitan centers 30 miles distance. Industrial area. Clinic and some office equipment available. Several churches, schools, and civic clubs. PW-23

Opportunity for GP to join well established four-man partnership; three general practitioners and one board certified surgeon. Practice located in city of 8,000 population, trade area of 60,000, north-central Alabama. Modern new partnership-owned offices adjacent to modern 125-bed fully accredited hospital. Salaried first year with possible partnership status at end of first year. PW-27

For community of 1,500 population located in south Alabama near city of 12,000 population. Hospitals located within 25 miles. Office space and equipment available. Farming, cattle and textile industries in the area. Several churches and school. Civic clubs and golf courses. PW-1-1

Opportunity for two general practitioners to assist two established GP's in a progressive comprehensive medical program in rural county of 12,500 population. Modern new office building, fully equipped, located in county seat, 20 miles west of Montgomery, Alabama. Excellent salary. Several churches, school, and recreation areas. PW-1/8

Opportunity in town of 3,000 population located in trade area of 12,000 population in south Alabama. 23-bed hospital. Office space available. Numerous churches and schools. Recreational areas nearby. PW-1/11

(Continued on Page 319)

Large Freshman Class To Attend UAB

One-hundred and twenty-five students have been accepted into the 1972-73 freshman class of the University of Alabama in Birmingham (UAB) School of Medicine, according to dean Clifton K. Meador.

A number of the students, representing 34 Alabama cities and towns, have attended colleges and universities in the state. Twenty-five of the students attended the University of Alabama, Tuscaloosa, 23 attended Auburn University, and the remainder represent 13 other Alabama schools. A number of the students hold advanced as well as bachelor's degrees.

A human being: an ingenious assemblage
of portable plumbing.

—Christopher Morley.

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Attention: James R. Mattingly,
Director

Drug For Acute Head Injuries

Victims of serious head injuries may soon have a better chance for survival thanks to some animal experiments conducted at the University of Chicago Hospital.

According to the National Society for Medical Research, Dr. J. C. de la Torre reported the Chicago research team's findings on a drug called dimethyl sulfoxide (DMSO) to the American College of Physicians meeting in Atlantic City, N. J.

DMSO was shown to decrease both the severity of head injuries and the mortality rate caused by head damage. The Chicago researchers chose DMSO as a possible therapeutic agent for head injury because of that drug's protective properties in some cells subjected to mechanical or chemical damage and its ability to remove water from tissue.

Thirty macaque rhesus monkeys were used with ten receiving saline, ten treated with urea and ten treated with DMSO. The monkeys were subjected to acute head trauma. All ten control animals receiving saline died. Of the ten urea treated animals, seven survived with three displaying neurological damage. Nine of the ten animals receiving DMSO survived with only one showing any further neurological damage.

Further animal experimentation is required before DMSO can be used on humans, but Dr. de la Torre and his group are very optimistic about the role that the drug may play in saving lives and preventing extensive brain deterioration caused by head injuries.

Anyone who bites off a free man's nose
must pay an indemnity of a pound of silver,
and give his farm buildings as security.

—The Hittite Code, c. 1350 B.C.

Iron therapy for anemia is almost as old as history itself



Celsus's empirical use of iron

Aulus Cornelius Celsus recommended an unusual form of iron therapy for the treatment of enlarged spleens—the oral administration of water that blacksmiths had used for dousing white-hot iron.

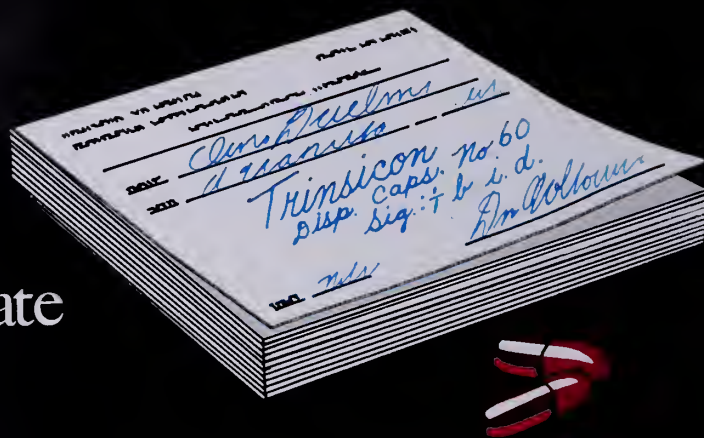
For more modern anemia therapy

Trinsicon[®]
Hematinic Concentrate
with Intrinsic Factor

(See reverse side for prescribing information.)

Trinsicon[®]

Hematinic Concentrate with Intrinsic Factor



Description: Each Pulvule[®] contains—

Special Liver-Stomach Concentrate, Lilly
(containing Intrinsic Factor) 240 mg.
Cobalamin Concentrate, N.F., equivalent to Cobalamin 7.5 mcg.
(The total vitamin B₁₂ activity in the Special Liver-Stomach Concentrate, Lilly, and the Cobalamin Concentrate, N.F., is 15 micrograms.)

Iron, Elemental (as Ferrous Fumarate) 110 mg.
Ascorbic Acid (Vitamin C) 75 mg.
Folic Acid 0.5 mg.

Indications: Trinsicon is a multifactor preparation effective in the treatment of anemias that respond to oral hematinics, including pernicious anemia and other megaloblastic anemias and also iron-deficiency anemia. Therapeutic quantities of hematopoietic factors that are known to be important are present in the recommended daily dose.

Vitamin B₁₂ with Intrinsic Factor—When secretion of intrinsic factor in gastric juice is inadequate or absent (e.g., in Addisonian pernicious anemia or after gastrectomy), vitamin B₁₂ in physiological doses is absorbed poorly, if at all. The resulting deficiency of vitamin B₁₂ leads to the clinical manifestations of pernicious anemia. Similar megaloblastic anemias may develop in fish tapeworm (*Diphyllobothrium latum*) infection or after a surgically created small-bowel blind loop; in these situations, treatment requires freeing the host of the parasites or bacteria which appear to compete for the available vitamin B₁₂. Strict vegetarianism and malabsorption syndromes may also lead to vitamin B₁₂ deficiency. In the latter case, parenteral therapy, or oral therapy with so-called massive doses of vitamin B₁₂, may be necessary for adequate treatment of the patient.

Potency of intrinsic factor concentrates is determined physiologically, i.e., by their use in patients with pernicious anemia. The liver-stomach concentrate with intrinsic factor and the vitamin B₁₂ contained in two Pulvules Trinsicon provide 1½ times the minimum amount of therapeutic agent which, when given daily in an uncomplicated case of pernicious anemia, will produce a satisfactory reticulocyte response and relief of anemia and symptoms.

Concentrates of intrinsic factor derived from hog gastric, pyloric, and duodenal mucosa have been used successfully in patients who lack intrinsic factor. For example, Fouts *et al.* maintained patients with pernicious anemia in clinical remission with oral therapy (liver extracts or intrinsic factor concentrate with vitamin B₁₂) for as long as twenty-nine years.

After total gastrectomy, Ficarra found multifactor preparations taken orally to be "just as effective in maintaining blood levels as any medication that has to be administered parenterally." His study was based on twenty-four patients who had survived for five years after total gastrectomy for cancer and who had been taking two Pulvules Trinsicon daily.

Folic Acid—Folic acid deficiency is the immediate cause of most, if not all, cases of nutritional megaloblastic anemia and of the megaloblastic anemias of pregnancy and infancy; usually, it is also at least partially responsible for the megaloblastic anemias of malabsorption syndromes, e.g., tropical and nontropical sprue.

It is apparent that in vitamin B₁₂ deficiency (e.g., pernicious anemia), lack of this vitamin results in impaired utilization of folic acid. There are other evidences of the close folic acid-vitamin B₁₂ interrelationship: (1) B₁₂ influences the storage, absorption, and utilization of folic acid, and (2), as a deficiency of B₁₂ progresses, the requirement for folic acid increases. However, folic acid does not change the requirement for vitamin B₁₂.

Iron—A very common anemia is that due to iron deficiency. In most cases, the response to iron salts is prompt, safe, and predictable. Within limits, the response is quicker and more certain to large doses of iron than to small doses.

Each Pulvule Trinsicon furnishes 110 mg. of elemental iron (as ferrous fumarate) to provide a maximum response.

Ascorbic Acid—Vitamin C plays a role in anemia therapy. It augments the conversion of folic acid to its active form, folinic acid. In addition, ascorbic acid promotes the reduction of ferric iron in food to the more readily absorbed ferrous form. Severe and prolonged vitamin C deficiency is associated with an anemia which is usually hypochromic but occasionally megaloblastic in type.

Contraindications and Precautions: Anemia is a manifestation that requires appropriate investigation to determine its cause or causes.

Folic acid *alone* is unwarranted in the treatment of pure vitamin-B₁₂-deficiency states, such as pernicious anemia. Indeed, the use of folic acid in large doses in pernicious anemia without adequate vitamin B₁₂ may result in hematologic remission but neurological progression.

As with all preparations containing intrinsic factor, resistance may develop in some cases of pernicious anemia to the potentiation of absorption of physiological doses of vitamin B₁₂. If resistance occurs, parenteral therapy, or oral therapy with so-called massive doses of vitamin B₁₂, may be necessary for adequate treatment of the patient. No single regimen fits all cases, and the status of the patient observed in follow-up is the final criterion for adequacy of therapy. Periodic clinical and laboratory studies are considered essential and are recommended.

In extremely rare instances, skin rash suggesting allergy has been noted following the oral administration of liver-stomach material. Allergic sensitization has been reported following both oral and parenteral administration of folic acid.

Hemochromatosis and hemosiderosis are contraindications to iron therapy.

Adverse Reactions: In rare instances, iron in therapeutic doses produces gastrointestinal reactions, such as diarrhea or constipation. Reducing the dose and administering it with meals will minimize these effects in the iron-sensitive patient.

Dosage: One Pulvule twice a day. (Two Pulvules daily produce a standard response in the average uncomplicated case of pernicious anemia.)

How Supplied: Pulvules Trinsicon[®] (hematinic concentrate with intrinsic factor, Lilly), in bottles of 60 and 500 and in *Identi-Dose*[®] (unit dose medication, Lilly) in boxes of 100.

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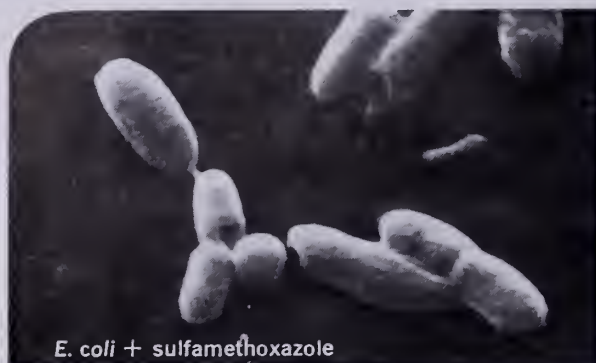
Encounter under the Scanning Electron Microscope



SEM reveals changes in *E. coli* exposed to antibacterial agents

The Scanning Electron Microscope (SEM) is the only instrument which gives 3-dimensional views on a microscopic level. This permits the surface morphology of microorganisms to be observed in

detailed perspective. Changes in surface morphology of *E. coli* exposed to various antimicrobial agents are seen on the following page. An SEM photomicrograph of normal control *E. coli* appears above.



E. coli + sulfamethoxazole



E. coli + tetracycline



E. coli + cephalothin



E. coli + ampicillin

Different modes of antibacterial action — Similar changes in morphology

As part of a series of experiments,¹⁻³ strains of *E. coli* proven susceptible to each antibacterial agent were exposed to 1 MIC of the respective antibacterials for a three-hour period. Included were cell-wall-active drugs, ampicillin and cephalothin; a drug interfering with intracellular protein synthesis, tetracycline; and a chemical agent which acts by interference with para-aminobenzoic acid, sulfamethoxazole.

As seen above, elongation of the bacilli, mid-cell defects and spheroplast-like forms may be appreciated with the SEM technique. These changes in bacterial morphology were similar... regardless of the antibacterial agent used and irrespective of

its mechanism of action.

"At present, the significance of these observations in clinical infection must be considered with caution, but it is hoped that these data will stimulate a reevaluation of present concepts of the nature and role of morphological variants of bacteria exposed to a variety of antibacterial factors."²

It should be noted that no clinical conclusions can be drawn from this study, as it is not always possible to extrapolate *in vitro* data to humans.

References: 1. Klainer, A. S.; Fass, R. J., and Perkins, R. L.: Scientific Exhibit presented at the 25th American Medical Association Clinical Convention, New Orleans, La., Nov. 28-Dec. 1, 1971. 2. Klainer, A. S., and Perkins, R. L.: *Antimicrob. Agents Chemother.*, 1:164, 1972. 3. Klainer, A. S.: Data on file, Hoffmann-La Roche Inc., Nutley, N.J.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Acute, recurrent or chronic nonobstructed urinary tract infections (primarily pyelonephritis, pyelitis and cystitis) due to susceptible organisms. **Note: Carefully coordinate *in vitro* sulfonamide sensitivity tests with bacteriologic and clinical response; add aminobenzoic acid to follow-up culture media.** The increasing frequency of resistant organisms limits the usefulness of antibacterials including sulfonamides, especially in chronic or recurrent urinary tract infections. Measure sulfonamide blood levels as variations may occur; 20 mg/100 ml should be maximum total level.

Contraindications: Sulfonamide hypersensitivity; pregnancy at term and during nursing period; infants less than two months of age.

Warnings: Safety during pregnancy has not been estab-

lished. Sulfonamides should not be used for group A hemolytic streptococcal infections and will not eradicate prevent sequelae (rheumatic fever, glomerulonephritis) of infections. Deaths from hypersensitivity reactions, agranulosis, aplastic anemia and other blood dyscrasias have been reported and early clinical signs (sore throat, fever, pallor, purpura or jaundice) may indicate serious blood disorders. Frequent and urinalysis with microscopic examination are recommended during sulfonamide therapy. Insufficient data on children under six with chronic renal disease.

Precautions: Use cautiously in patients with impaired or hepatic function, severe allergy, bronchial asthma; in glutathione 6-phosphate dehydrogenase-deficient individuals in whom related hemolysis may occur. Maintain adequate fluid intake to prevent crystalluria and stone formation.

Adverse Reactions: Blood dyscrasias (agranulocytosis,

Encounter in Clinical Practice

Control of primary bacterial offenders

Antibacterial Gantanol® (sulfamethoxazole) controls susceptible strains of *E. coli* and other gram-negative and gram-positive organisms

often implicated in acute nonobstructed pyelonephritis and cystitis.

Prompt antibacterial blood and urine levels

In from 2 to 3 hours after the initial 2-Gm adult dose, antibacterial levels are present in

both the blood and urine.

B.I.D./T.I.D. dosage for around-the-clock coverage

Subsequent 1-Gm doses provide up to 12 hours of antibacterial coverage. More severe u.t.i. may require a q. 8 h. dosage regimen. Either schedule provides coverage during the waking

and sleeping hours—especially important during hours of sleep when normal urinary retention tends to favor bacterial proliferation.

Also effective in nonobstructed chronic and recurrent u.t.i.

It is not uncommon for the elderly and the debilitated to develop chronic and/or recurrent nonobstructed urinary tract infections such as pyelonephritis and cystitis. Such cases often re-

spond satisfactorily to Gantanol. The increasing frequency of resistant organisms is a limitation of usefulness of antibacterial agents including sulfonamides, especially in chronic or recurrent u.t.i.

Your Option: Tablets or Suspension

Either dosage form—the Tablets or the pleasant-tasting, cherry-flavored Suspension—can provide the dependable antibacterial activity necessary to control susceptible nonobstructed cystitis and pyelonephritis. Symptomatic improvement may usually be expected in 24 to 48 hours. The usual precautions with sulfonamide

therapy should be observed, including adequate fluid intake. Gantanol (sulfamethoxazole) is generally well tolerated with relative freedom from complications; the most common side effects are nausea, vomiting and diarrhea. Frequent c.b.c.'s and urinalyses with microscopic examination are recommended.

In nonobstructed cystitis and pyelonephritis due to susceptible organisms

Gantanol[®]
(sulfamethoxazole)
Basic Therapy

stic anemia, thrombocytopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia); *allergic reactions* (erythema multiforme, skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctivitis, and scleral injection, photosensitization, arthralgia and allergic myocarditis); *gastrointestinal reactions* (nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and colitis); *CNS reactions* (headache, peripheral neuritis, meningeal depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia); *miscellaneous reactions* (drug fever, chills, nephrosis with oliguria and anuria, periarteritis nodosa and Raynaud phenomenon). Due to certain chemical similarities with other goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of hyperproduction, diuresis and hypoglycemia as well as thy-

roid malignancies in rats following long-term administration. Cross-sensitivity with these agents may exist.

Dosage: Systemic sulfonamides are contraindicated in infants under 2 months of age (except adjunctively with pyrimethamine in congenital toxoplasmosis).

Usual adult dosage: 2 Gm (4 tabs or teasp.) initially, then 1 Gm b.i.d. or t.i.d. depending on severity of infection.

Usual child's dosage: 0.5 Gm (1 tab or teasp.)/20 lbs of body weight initially, then 0.25 Gm/20 lbs b.i.d. Maximum dose should not exceed 75 mg/kg/24 hrs.

Supplied: Tablets, 0.5 Gm sulfamethoxazole; Suspension, 0.5 Gm sulfamethoxazole/teaspoonful.



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"The history of science, and in particular the history of medicine . . . is . . . the history of man's reactions to the truth, the history of the gradual revelation of truth, the history of the gradual liberation of our minds from darkness and prejudice."

—George Sarton, from "The History of Medicine Versus the History of Art"

Are combination drug products useful in treatment involving concomitant use of two or more drugs?

Opinion

Results of a questionnaire to 7,000 physicians:

62.9%

Believe combination drug products are useful.

13.8%

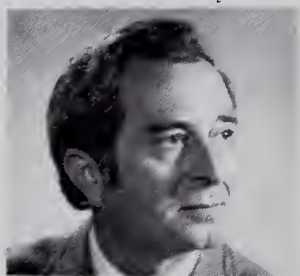
Do not believe combination drug products are useful.

Are combination drug products useful in treatment involving concomitant use of two or more drugs?

Opinion & Dialogue

Doctor of Medicine

Louis Lasagna, M.D.
Professor and Chairman
Department of
Pharmacology & Toxicology
University of Rochester
School of Medicine
and Dentistry



Obviously, many drugs are given concomitantly. Whether it makes sense to combine medications in one preparation, be it capsule, tablet, or liquid, is a question that can be answered only by examining the advantages and disadvantages in the individual case.

Among the advantages is, first of all, convenience. The more medications that are taken concurrently and the more complicated the directions, the less likely the patient is to take medications accurately. From the standpoint of convenience and accuracy, and economy as well, you can make an important case for putting medications together in one preparation, as long as they are compatible.

By the same token, when you prescribe a properly tested and rational combination, you should have less worry about pharmaceutical or pharmacological compatibility — and about reasonable dosage ratios as well. Compatibility of the formulation should be demonstrated in the laboratory and clinic before the product is available for prescription—which is more than can usually be said for

the physician's own spontaneous creations. And, the dosage ratios employed in rational precompounded combinations are designed to meet the needs of substantial numbers of "typical" patients.

There is no doubt that many "atypical" patients are to be found, and for them the prefabricated combination must be rejected. But that hardly argues for eliminating rational combinations from the market. Think, for example, of the problems that would arise if the components of widely accepted combinations, like the oral contraceptives and the diuretic-antihypertensives, always had to be prescribed, purchased and ingested separately.

One disadvantage that comes to mind is some doctors' unawareness of the ingredients a given combination contains. For example, a doctor might know that a patient is allergic to aspirin but forget that a certain analgesic mixture, which he knows only by its trade name, contains aspirin. His prescription, then, causes considerable discomfort, to say the least. This problem is a function of physician education, rather than of combination therapy as such. Improving doctors' knowledge about all medicaments they prescribe is a problem that deserves tackling on its own.

Another accusation leveled at combination drugs is that they encourage sloppiness of diagnosis and treatment. In many cases, however, a combination may prove to be the most effective choice. A good ex-

ample of the usefulness of combinations appears in a recent article in the *Journal of Chronic Diseases* on the efficacy and side effects of an antihypertensive containing three ingredients, in which the track records of the combination drug and the individual ingredients were compared. Interestingly enough, whether the drugs were given individually or together, incidence and severity of side effects were the same. But blood pressure control was invariably better when the drugs were taken in one combination tablet than when they were taken separately (in "titratable" dosage) or in two or three different tablets.

Deciding which combinations constitute rational therapy obviously leads to a discussion of who is to determine which should be used and which should not. Realistically, I think combinations should be evaluated somewhat differently if they are old and established or new and untried.

In today's regulatory atmosphere, there is no possibility of a new combination being put on the market without a substantial amount of acceptable evidence in the form of controlled trials that show it to be safe and efficacious. On the other hand, I believe a different set of standards should apply to combination preparations that have been around for a long time. In other words, physician acceptance over a long period should be given some weight as evidence of the efficacy and safety of these drugs.

The FDA, however, does not seem to share this attitude. It often requires, for these older products, controlled trials that will monopolize the time of already overtired investiga-

tors and cost a great deal of money. I wish we could agree on a "grandfather clause" approach to preparations that have been around for a number of years that have an apparently satisfactory track record.

For example, I think some of the antibiotic combinations that were off the market by the time they were performed quite well, thinking particular penicillin-streptomycin combinations that patients—especially surgical patients—were given in injection. This made less discomfort for the patient, less demand on nurses' time, and it offered opportunities for fewer errors. To take such preparation off the market doesn't seem to be good medicine, unless actual evidence showed a great deal of harm from the injection (rather than the preparation) of the combination.

The point that should be emphasized is that both rational and traditional combinations are a real question is, who determines which is valid? Obviously, the FDA plays a major role in making this determination. In fact, I don't think it is avoid taking the ultimate responsibility, but it is to enlist the help of other physicians and experts in assessing the evidence in making the ultimate decision.

Maker of Medicine

Clarke Wescoe, M.D.
President
Inthrop Laboratories



two medications are effectively to treat a condition, and it is even that they are comparable, it clearly is useful convenient to provide in one dosage form. could make no sense, in it would be pedantic, insist they always be described separately. To the appearance of entry, the "expert" de the combination be e it is a fixed dosage. When the "expert" kes the concept of fixed ge form he obscures fact that single-ingred pharmaceutical preparations are also fixed ge forms. By a singular untic exercise he im- a pejorative meaning he term "fixed dose" when he uses it with ect to combinations. t is ignored is the sim- fact that only in the st of circumstances any physician attempt trate an exact thera- ic response in his pa-. It is quite possible some aches and pains respond to 500 mg. of in yet that fact does nilitate against the us- lose being 650 mg. e other semantic ploy called into play is to rcribe a combination uct as rational or irra- d. ke antibiotic mixtures, source of much of the ism generated against

combinations generally. Obviously, no one should be exposed willy-nilly to the potential side effects of two or three antibiotics when only one is needed. At the same time there are cases where it is prudent to prescribe more than one. The clinician is the judge in these circumstances, as he should be.

There is no clear definition of the word rational. Most persons, I suppose, would find it synonymous with reasonable, but in many circumstances it may best be defined as the opinion of those in power at the moment.

Other factors govern combination therapy, not the least of which has been its broad use by practicing physicians anxious to achieve convenience in prescribing, to reduce medication error, and to save money for their patients. Combinations clearly have met the test on all three counts.

I have been impressed by studies showing that the rate of error climbs markedly with the number of medications to be taken, even with sophisticated patients. When medically justified, therefore, this factor alone supports the logic of combination therapy.

The cost argument for combinations appears to be irrefutable. In 1971, R. A. Gosselin studied the 71 combination products (excluding oral contraceptives) among the 200 most prescribed drugs. The study found that if all 71 products were discontinued, and if each ingredient in these combinations were prescribed separately, the price of medicines to patients would jump by \$443.2 million on a national basis! At a time when the cost of medical care is under so much fire, it would be nonsensical to boost costs without clearly irre-

futable medical reasons.

The part played by government on this question, of course, is fundamental. The FDA should play a role in determining which combinations are reasonable. That role, as defined by law and regulation, is to ensure that any medication on the market is safe and effective in line with its label claims. Certainly combinations are entitled to as much consideration as single entities—neither more nor less. So long as the addition of one drug to another does not make either less safe, or less effective, so long as they are compatible in a formulation, we have a reasonable product. It makes no sense to recommend the use of two products for certain conditions and to deny their being combined in a single form. An unhappy side effect of the problem concerns the efficacy panel discussions of many products submitted for review. The term "effective, but" has been freely interpreted to mean "ineffective" in toto, regardless of the merit of the individual drugs. This interpretation has placed numerous useful combination products in needless jeopardy.

In reading the actual reports of the review panels, it seems clear that some of the ratings were based less on scientific research and clinical observation than on the "informed" opinions of the panelists. These "informed" opinions were accepted at face value, while

the "informed" opinions of others who had used the products were rejected. All of this put combination products into a sort of scientific never-never land.

It should be kept in mind by all, government as well as others involved in our health care system, that advances in therapy are seldom made in leaps and bounds but rather by small painstaking steps—and that some of these steps have resulted from research in combination drugs as well as with single entities. Given the near-infinite biologic variation in patient response, this is hardly surprising to clinicians. It should not be to regulatory agencies either.

In the end, the practicing physician is in the best position to decide if a particular combination makes sense. Such a decision should not be made exclusively by those whose responsibility for continuing clinical care is limited. Clinicians are the best judges of efficacy because the ultimate proof of any product's effectiveness is acceptance by physicians who have observed its actions in patients over time. The corollary statement may be made about over-the-counter medicines, which would not long survive if they failed to afford the relief the user anticipates. That the antihistamine in a "cold" remedy may not *always* be necessary is no reason to proscribe the combination generally.

Opinion & Dialogue

What is your opinion, doctor?

We would welcome your comments.



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PLACEMENT SERVICE

(Continued from Page 307)

Opportunity for associate in general practice or take over general practice in town of 1,200 population in south central Alabama with trade area of 5,000 population. Well established practice and well equipped office. Located near recreational area. PW-1/12

Opportunity in town of 3,000 population in trade area of 15,000 located in West Alabama. Clinic building available with equipment. Farming and several small industries. Several schools and churches. PW-1/13

Opportunity in south Alabama in town of 2,700 population, trade area of 15,000 population. Nearest large city of 30,000 population located 45 miles. Nearest hospital is 10 miles. One physician

now engaged in practice in the town. Necessary arrangements will be made for office space, equipment, and housing. Industrial and agricultural area. Churches, schools, civic and social activities. PW-30

Partner wanted in general practice. Recent death of previous associate. Large family practice located in a suburb of Mobile. Excellent hospitals. PW-31

Opportunity in southeast Alabama in town of 3,000 population, trade area of 15,000 population. Nearest large city, 8 miles, 40,000 population, and 2 large hospitals. Office space and housing readily available. Industrial and agricultural area. Churches, schools, civic and social activities. PW-35

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his pinworms...



with just one non-staining dose of Antiminth (pyrantel pamoate) Oral Suspension.

Highly effective. Active against pinworm...and roundworm.

Non-staining. Doesn't stain teeth or oral mucosa on ingestion.

Doesn't stain stools, clothing or linen.

Simple dosage. Single-dose regimen: 1 cc. per 10 lbs. of body weight (1 tsp. per 50 lbs.).

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Pleasant-tasting. Easy-to-take, caramel-flavored oral suspension.

Economical. One prescription for the entire family.

Antiminth (pyrantel pamoate) Oral Suspension

Actions. Antiminth (pyrantel pamoate) has demonstrated anthelmintic activity against *Enterobius vermicularis* (pinworm) and *Ascaris lumbricoides* (roundworm). The anthelmintic action is probably due to the neuromuscular blocking property of the drug.

Antiminth is partially absorbed after an oral dose. Plasma levels of unchanged drug are low. Peak levels (0.05-0.13 $\mu\text{g/ml}$) are reached in 1-3 hours. Quantities greater than 50% of administered drug are excreted in feces as the unchanged form, whereas only 7% or less of the dose is found in urine as the unchanged form of the drug and its metabolites.

Indications. For the treatment of ascariasis (roundworm infection) and enterobiasis (pinworm infection).

Warnings. *Usage in Pregnancy:* Reproduction studies have been performed in animals and there was no evidence of propensity for harm to the fetus. The relevance to the human is not known.

There is no experience in pregnant women who have received this drug.

Precautions. Minor transient elevations of SGOT have occurred in a small percentage of patients. Therefore, this drug should be used with caution in patients with pre-existing liver dysfunction.

Adverse Reactions. The most frequently encountered adverse reactions are related to the gastrointestinal system.

Gastrointestinal and hepatic reactions: anorexia, nausea, vomiting, gastralgia, abdominal cramps, diarrhea and tenesmus, transient elevation of SGOT.

CNS reactions: headache, dizziness, drowsiness, and insomnia.

Skin reactions: rashes.

Dosage and Administration. *Children and Adults:* Antiminth Oral Suspension (50 mg. of pyrantel base/ml.) should be administered in a single dose of 11 mg. of pyrantel base per kg. of body weight (or 5 mg./lb.); maximum total dose 1 gram. This corresponds to a simplified dosage regimen of 1 cc. of Antiminth per 10 lbs. of body weight. (One teaspoonful = 5 cc.)

Antiminth (pyrantel pamoate) Oral Suspension may be administered without regard to ingestion of food or time of day; and purging is not necessary prior to, during, or after therapy. It may be taken with milk or fruit juices. Because of limited data on repeated doses, no recommendations can be made.

How Supplied. Antiminth is available as a pleasant tasting caramel-flavored suspension which contains the equivalent of 50 mg. pyrantel base per ml., supplied in 60 cc. bottles.

ent:

new **ANTIMINTH**[®]
(pyrantel pamoate)

equivalent to 50 mg pyrantel/ml.

ORAL SUSPENSION

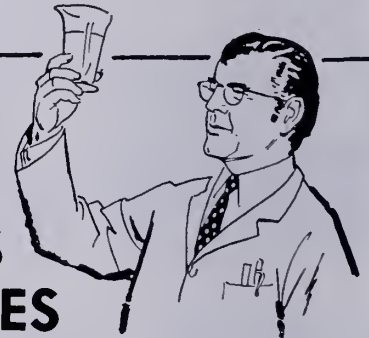
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During anginal attacks, patients may suffer intense apprehension. More frequently, however, they experience a continuing sense of less severe but nonetheless disproportionate anxiety.

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Adjunctive Librium (chlordiazepoxide HCl) may be especially suitable for relief of clinically significant anxiety and emotional tension in anginal patients because of its generally prompt therapeutic effectiveness and wide margin of safety. In a recent double-blind randomized study, Librium (chlordiazepoxide HCl) was administered for relief of moderate anxiety in 20 anginal patients seen in office practice over a 20-week period. Symptoms of emotional distress related to anxiety were rated at base-line, one week, two weeks and monthly thereafter. Relief was obtained notably early in therapy. The clinical results demonstrated that Librium offers the coronary patient an antianxiety drug that, in the author's opinion, is both effective and safe. In general use, the most common side effects reported have been drowsiness, ataxia and confusion, particularly in the elderly and debilitated. (See summary of prescribing information.)*

Librium (chlordiazepoxide HCl) is used concomitantly with certain specific medications of other classes of drugs, such as cardiac glycosides, diuretics and antihypertensive agents, whenever anxiety is clinically significant. The drug should be discontinued after anxiety has been reduced to appropriate levels.

The positive power of
adjunctive
Librium®
(chlordiazepoxide HCl)
10-mg, 25-mg capsules
up to 100 mg daily
for moderate
to severe anxiety
accompanying angina pectoris

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Relief of anxiety and tension occurring alone or accompanying various disease states.

Contraindications: Patients with known hypersensitivity to the drug.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards.

Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

Supplied: Librium® Capsules containing 5 mg, 10 mg or 25 mg chlordiazepoxide HCl. Libritabs® Tablets containing 5 mg, 10 mg or 25 mg chlordiazepoxide.

*Levine, S.: "Angina Pectoris and Emotional Overlay," Scientific Exhibit presented at the Annual Meeting of the Maine Medical Association, Kennebunkport, Me., June 13-15, 1971.

A copy of the Levine study may be obtained from your Roche representative.



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Why send him to the islets of Langerhans?



Since sulfonylureas promote the release of insulin which is lipogenic and helps transport glucose into adipose tissue...

And since many overweight patients already have normal or high levels of endogenous insulin, why not consider DBI-TD?

It lowers blood sugar without stimulating

insulin secretion from the pancreas. And this may be important to the dieting diabetic.

In adult-onset, nonketotic diabetics uncontrolled by diet alone...

DBI-TD[®] Geigy
phenformin HCl

lowers blood sugar without raising blood insulin.

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Tablets of 25 mg.

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Capsules of 50 and 100 mg.

Indications: Stable adult diabetes mellitus; sulfonylurea failures, primary and secondary; adjunct to insulin therapy of unstable diabetes mellitus.

Contraindications: Diabetes mellitus that can be regulated by diet alone; juvenile diabetes mellitus that is uncomplicated and well regulated on insulin; acute complications of diabetes mellitus (metabolic acidosis, coma, infection, gangrene); during or immediately after surgery where insulin is indispensable; severe hepatic disease; renal disease with uremia; cardiovascular collapse (shock); after disease states associated with hypoxemia.

Warnings: Use during pregnancy is to be avoided.

Precautions: 1. *Starvation Ketosis:*

This must be differentiated from "insulin lack" ketosis and is characterized by ketonuria which, in spite of relatively normal blood and urine sugar, may result from excessive phenformin therapy, excessive insulin reduction, or insufficient carbohydrate intake. Adjust insulin dosage, lower phenformin dosage, or supply carbohydrates to alleviate this state.

Do not give insulin without first checking blood and urine sugar. 2. *Lactic Acidosis:* This drug is not recommended in the presence of azotemia or in any clinical situation that predisposes to sustained hypotension that could lead to lactic acidosis. To differentiate lactic acidosis from ketoacidosis, periodic

determinations of ketones in the blood and urine should be made in diabetics previously stabilized on phenformin, or phenformin and insulin, who have become unstable. If electrolyte imbalance is suspected, periodic determinations should also be made of electrolytes, pH, and the lactate-pyruvate ratio. The drug should be withdrawn and insulin, when required, and other corrective measures instituted immediately upon the appearance of any metabolic acidosis.

3. *Hypoglycemia:* Although hypoglycemic reactions are rare when phenformin is used alone, every precaution should be observed during the dosage adjustment period particularly when insulin or a sulfonylurea has been given in combination with phenformin. **Adverse Reactions:** Principally

gastrointestinal; unpleasant metallic taste, continuing to anorexia, nausea and, less frequently, vomiting and diarrhea. Reduce dosage at first sign of these symptoms. In case of vomiting, the drug should be immediately withdrawn. Although rare, urticaria has been reported, as have gastrointestinal symptoms such as anorexia, nausea and vomiting following excessive alcohol intake. (B) 98-146-103-D (6/72)

For complete details, including dosage, please see full prescribing information.

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President's Page

Reorganization

Every physician in this State is directly concerned, whether he realizes it or not, in the organization or structure of our central governing boards. The public image of all of us is reflected by the character of our central organization.

Your Board of Censors and Board of Trustees, at present, is attempting to present a unified compromise in regard to the three resolutions to be considered and acted on at our next Annual Session in regard to reorganization of our Association's structure. It is this writer's opinion that this proposed compromise, now under consideration, will result in the formation of a single-enlarged governing board that will be more efficient and more responsive to the needs of our Association.

The current proposal is to dissolve the Board of Trustees and to enlarge the Board of Censors to an 18-member Board. One member of this board is to be elected from each congressional district. The president of the Association, the president-elect and the immediate past president are to be members of this Board. The remaining eight members are to be elected at large. This Board would be divided into three Subcommittees; a Subcommittee on Association Affairs, a Subcommittee on Medical Examiners and a Subcommittee on Board of Health Affairs. Delegation of authority would be given to the Subcommittee on Association Affairs. Decisions of sufficient importance could be referred to the Board as a whole, if the Subcommittee on Association Affairs



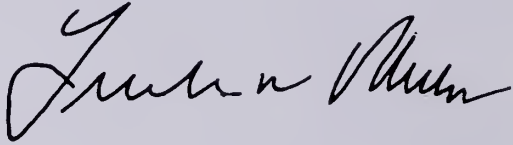
DR. PHILLIPPI

deemed advisable. The same would apply to the Subcommittee acting as the Board of Medical Examiners. The entire Board would have to be responsible for decisions regarding its functions as a Board of Health. The Board would elect its chairman, who would preside over the entire Board when in session, and he would preside over the Subcommittee acting on affairs of the Board of Health. The president of the Association would preside over the Subcommittee on Association Affairs.

Your Association is sincerely attempting to get more participation from its membership and to bring your Association closer to its membership. The three programs now underway and envisioned will help greatly in this regard. These programs being our Physician-Liability Insurance Program, our Continuing Medical Education Program and our envisioned printing service to our membership.

At our next Annual Session, a system of Reference Committee hearings will be held

on Wednesday. In these Reference Committee hearings any member may participate whether he is a delegate, a counsellor or a member-at-large. He is free to present his criticism, his views or suggestions, and they will be given consideration. We are in hopes that these Reference Committee hearings will be well attended.



Frank M. Phillippi, Jr., M. D.

It is discouraging to try to be a good neighbor in a bad neighborhood.

—William R. Castle, 1939.

If he knows enough to be hanged, he knows enough to vote.

—Frederick Douglass, 1863.

Austerity is a disease. I would a thousand times rather be stricken with fever . . . than think gloomily.

—Voltaire, 1737.

{ **SINCE 1896** }

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...Still an
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Iron therapy for anemia is almost as old as history itself



Celsus's empirical use of iron

Aulus Cornelius Celsus recommended an unusual form of iron therapy for the treatment of enlarged spleens—the oral administration of water that blacksmiths had used for dousing white-hot iron.

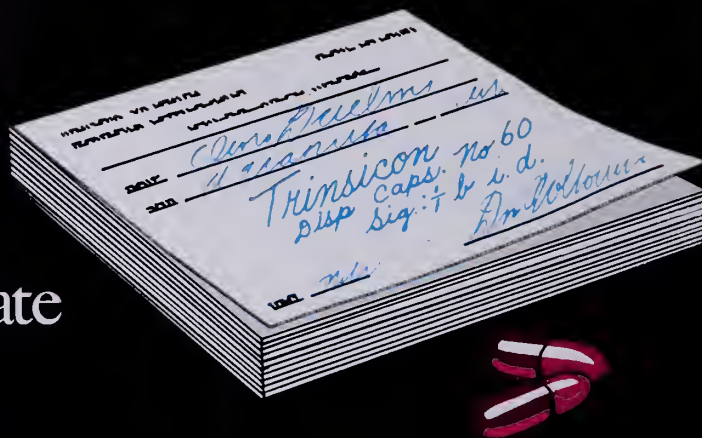
For more modern anemia therapy

Trinsicon[®]
Hematinic Concentrate
with Intrinsic Factor

(See reverse side for prescribing information.)

Trinsicon®

Hematinic Concentrate with Intrinsic Factor



Description: Each Pulvule® contains—

Special Liver-Stomach Concentrate, Lilly
(containing Intrinsic Factor) 240 mg.
Cobalamin Concentrate, N.F., equivalent to Cobalamin 7.5 mcg.
(The total vitamin B₁₂ activity in the Special Liver-Stomach Concentrate, Lilly, and the Cobalamin Concentrate, N.F., is 15 micrograms.)

Iron, Elemental (as Ferrous Fumarate) 110 mg.
Ascorbic Acid (Vitamin C) 75 mg.
Folic Acid 0.5 mg.

Indications: Trinsicon is a multifactor preparation effective in the treatment of anemias that respond to oral hematinics, including pernicious anemia and other megaloblastic anemias and also iron-deficiency anemia. Therapeutic quantities of hematopoietic factors that are known to be important are present in the recommended daily dose.

Vitamin B₁₂ with Intrinsic Factor—When secretion of intrinsic factor in gastric juice is inadequate or absent (e.g., in Addisonian pernicious anemia or after gastrectomy), vitamin B₁₂ in physiological doses is absorbed poorly, if at all. The resulting deficiency of vitamin B₁₂ leads to the clinical manifestations of pernicious anemia. Similar megaloblastic anemias may develop in fish tapeworm (*Diphyllobothrium latum*) infection or after a surgically created small-bowel blind loop; in these situations, treatment requires freeing the host of the parasites or bacteria which appear to compete for the available vitamin B₁₂. Strict vegetarianism and malabsorption syndromes may also lead to vitamin B₁₂ deficiency. In the latter case, parenteral therapy, or oral therapy with so-called massive doses of vitamin B₁₂, may be necessary for adequate treatment of the patient.

Potency of intrinsic factor concentrates is determined physiologically, i.e., by their use in patients with pernicious anemia. The liver-stomach concentrate with intrinsic factor and the vitamin B₁₂ contained in two Pulvules Trinsicon provide 1½ times the minimum amount of therapeutic agent which, when given daily in an uncomplicated case of pernicious anemia, will produce a satisfactory reticulocyte response and relief of anemia and symptoms.

Concentrates of intrinsic factor derived from hog gastric, pyloric, and duodenal mucosa have been used successfully in patients who lack intrinsic factor. For example, Fouts *et al.* maintained patients with pernicious anemia in clinical remission with oral therapy (liver extracts or intrinsic factor concentrate with vitamin B₁₂) for as long as twenty-nine years.

After total gastrectomy, Ficarra found multifactor preparations taken orally to be "just as effective in maintaining blood levels as any medication that has to be administered parenterally." His study was based on twenty-four patients who had survived for five years after total gastrectomy for cancer and who had been taking two Pulvules Trinsicon daily.

Folic Acid—Folic acid deficiency is the immediate cause of most, if not all, cases of nutritional megaloblastic anemia and of the megaloblastic anemias of pregnancy and infancy; usually, it is also at least partially responsible for the megaloblastic anemias of malabsorption syndromes, e.g., tropical and nontropical sprue.

It is apparent that in vitamin B₁₂ deficiency (e.g., pernicious anemia), lack of this vitamin results in impaired utilization of folic acid. There are other evidences of the close folic acid-vitamin B₁₂ interrelationship: (1) B₁₂ influences the storage, absorption, and utilization of folic acid, and (2), as a deficiency of B₁₂ progresses, the requirement for folic acid increases. However, folic acid does not change the requirement for vitamin B₁₂.

Iron—A very common anemia is that due to iron deficiency. In most cases, the response to iron salts is prompt, safe, and predictable. Within limits, the response is quicker and more certain to large doses of iron than to small doses.

Each Pulvule Trinsicon furnishes 110 mg. of elemental iron (as ferrous fumarate) to provide a maximum response.

Ascorbic Acid—Vitamin C plays a role in anemia therapy. It augments the conversion of folic acid to its active form, folinic acid. In addition, ascorbic acid promotes the reduction of ferric iron in food to the more readily absorbed ferrous form. Severe and prolonged vitamin C deficiency is associated with an anemia which is usually hypochromic but occasionally megaloblastic in type.

Contraindications and Precautions: Anemia is a manifestation that requires appropriate investigation to determine its cause or causes.

Folic acid *alone* is unwarranted in the treatment of pure vitamin-B₁₂-deficiency states, such as pernicious anemia. Indeed, the use of folic acid in large doses in pernicious anemia without adequate vitamin B₁₂ may result in hematologic remission but neurological progression.

As with all preparations containing intrinsic factor, resistance may develop in some cases of pernicious anemia to the potentiation of absorption of physiological doses of vitamin B₁₂. If resistance occurs, parenteral therapy, or oral therapy with so-called massive doses of vitamin B₁₂, may be necessary for adequate treatment of the patient. No single regimen fits all cases, and the status of the patient observed in follow-up is the final criterion for adequacy of therapy. Periodic clinical and laboratory studies are considered essential and are recommended.

In extremely rare instances, skin rash suggesting allergy has been noted following the oral administration of liver-stomach material. Allergic sensitization has been reported following both oral and parenteral administration of folic acid.

Hemochromatosis and hemosiderosis are contraindications to iron therapy.

Adverse Reactions: In rare instances, iron in therapeutic doses produces gastrointestinal reactions, such as diarrhea or constipation. Reducing the dose and administering it with meals will minimize these effects in the iron-sensitive patient.

Dosage: One Pulvule twice a day. (Two Pulvules daily produce a standard response in the average uncomplicated case of pernicious anemia.)

How Supplied: Pulvules Trinsicon® (hematinic concentrate with intrinsic factor, Lilly), in bottles of 60 and 500 and in Identi-Dose® (unit dose medication, Lilly) in boxes of 100.

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Hematinic Concentrate with Intrinsic Factor

A Comprehensive Hematinic

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AUXILIARY PLEDGE

"I pledge my loyalty and devotion to the Woman's Auxiliary to the American Medical Association. I will support its activities, protect its reputation and ever sustain its high ideals."

Who Is Responsible?

Last year there were 1,250 people killed in Alabama due to automobile accidents. One out of every two of our children born today will either be killed or suffer injury from a traffic accident. Everyone is concerned, but very few people consider themselves a part of the problem. Many ask "What can I do about it. My efforts seem pitifully small." We are all responsible for highway safety. This is another one of those situations where there is a need for group action.

The Highway Safety Act, passed by Congress in 1966, provides a framework in which statewide comprehensive traffic safety programs can be developed. Under its authority, the Secretary of Transportation has issued 16 Highway Safety Program Standards which set forth guidelines for state and community traffic safety programs. Alabama has a long way to go in meeting these standards. Many states are ahead of us, and it shows in their number of traffic deaths. Alabama has a 6.7 death rate per million miles as compared to a 5.0 national rate. The rate is 4.7 in states that have a safety inspection program. Many people in this state feel that the time has come for some legislative action.

The Women Highway Safety Leaders are joining forces with other women's organizations to promote a "Package of Five Bills" covering legislation needed to implement five of the standards under the Highway Safety Act. Everyone is being urged to become familiar with the facts prior to asking their Representatives and Senators to support this legislation during the next regular session of the Legislature.



MRS. HANSBERRY

"The Package of Five" includes five of the most important standards. 1) *Periodic Motor Vehicle Inspection*—Alabama has been trying to get this legislation for the past 15 years. 2) *Motor Vehicle Registration*—this should also require a Title Law. Alabama is one of two States without a Title Law. 3) *Driver Education*—Alabama has a mandatory Driver Education Law requiring all 10th grade students in Public Schools to have a DE course before receiving their diplomas. However, sufficient appropriation for enforcement was not provided by the law. 4) *Driver Licensing*—Re-examination and classified licenses are both badly needed. At the present time a current driver's license permits the holder to operate any motorized vehicle, from motorcycles to semi-trailer

trucks. 5) *Traffic Courts*—all moving traffic violations should be reported to the state traffic records system. Traffic courts should be financially independent of any fee system, fines or revenue from the processing of violations. Also needed is a uniform accounting system for handling traffic violation notices, collection of fines, etc.

The Woman's Auxiliary would like the support of the doctors in working for this much needed legislation.

A. Rae Hansberry

A. Rae Hansberry
President



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'Dicarbosil' hasn't
been invented yet."*

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Why you should use a Collection Agency

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DOCTOR: Your End Of The Partnership

The MASA/Wausau Professional Liability Insurance Program will succeed to the degree, and *only* to the degree, that it finds favor and support within the whole Alabama medical community.

One provision of the agreement with your Association and Employers of Wausau is that at least 1,500 members will be enrolled within three years. Our partnership will prosper a good deal better if we can bring in more than the stipulated minimum number in less than the stipulated maximum time.

This very minute, you and your colleagues are making the rates which you'll be paying for your malpractice liability insurance

in 1974 and 1975. The sooner we start making these rates together—and the more doctors joining in the effort—the better our chances of keeping rates down.

The major carriers in Rhode Island have just filed for increases up to 83 per cent, despite low loss experience. Inauguration of the MASA/Wausau plan is a prime reason this won't happen anytime soon in Alabama. In fact, requests for rate increases have been withdrawn here.

The success of the program and the cost of professional liability insurance in Alabama in the future depends on your participation.

Embryo Banks May Be Feasible

An English scientist has reported a study which indicates that the establishment of embryo banks is a very real possibility for the future of animal breeding, and perhaps for human reproduction.

Dr. David G. Whittingham, a researcher at the University of Cambridge, made his report at a meeting held by Johns Hopkins University and the Jackson Laboratory in Bar Harbor, Maine.

According to the National Society for Medical Research, Dr. Whittingham conducted his work with the fertilized eggs of mice. The scientist artificially fertilized mice ovums with male sperm in a test tube. The eggs were then cultured until each had reached the eight cell stage, the

point at which they are considered to be embryos.

Dr. Whittingham then stopped the growing process by lowering the temperature of the embryos to approximately minus 79 degrees Centigrade. At this point the embryos can remain frozen for long periods.

The embryos were later thawed and implanted in foster mothers where they became attached to the uterine wall and developed into normal baby mice.

There was no speculation by Dr. Whittingham about what the process could mean in human reproduction, but he did say it might be possible to preserve many generations of

(Continued on Page 369)

PHYSICIAN PLACEMENT SERVICE IN ALABAMA

The Physician Placement Service of the Medical Association of the State of Alabama is designed to assist both physicians and communities. MASA members having knowledge of practice opportunities or wishing to relocate their own practices are urged to communicate with the Placement Service. For further information: write Mr. Emmett Wyatt, Executive Assistant, Medical Association of the State of Alabama, 19 South Jackson Street, Montgomery, Alabama 36104, or Telephone 263-6441.

Locations Wanted

Anesthesiology—

Age 54; Medical College of Alabama, 1949; Board certified; seeking associate or institutional practice. LW-2/9

Age 46; King's College Hospital, London, England 1952; Board certified; seeking solo or group practice. LW-2/10

General Practice—

Age 27; Univ. of Tennessee, 1970; seeking group practice; Available July 1973. LW-3/1

Age 31; University of Kansas, 1966; seeking associate or group practice; Available July 1973. LW-3/2

Age 32; University of Texas, Southwestern, 1968; seeking institutional practice; Available January 1973. LW-3/3

Age 41; Temple University, 1963; National Board; Board eligible; seeking associate or group practice; Available December 1972. LW-3/4

Age 45; University of Alabama, 1963; Available July 1973. LW-3/9

Age 31; St. Louis University, 1966; National Board; seeking associate practice. LW-3/10

Age 32; University of Missouri, 1965; National Board; Board eligible, 1974; seeking solo, associate or group practice; Available Spring of 1973.

Internal Medicine—

Age 31; University of Miami, 1964; Board certified, seeking group or institutional practice. Available January 1973. LW-4/7

Age 30; Univ. of Virginia, 1967; Board eligible; seeking group practice; Available June 30, 1973. LW-4/15

Age 30; Vanderbilt University, 1967; National Board; Board eligible; seeking solo, associate, or group practice; Available July, 1973. LW-4/16

Age 34; Georgetown University, 1964; Board certified; seeking group, associate or institutional practice; Available July 1973. LW-4/18

Age 40; University of Kentucky, 1969; Board eligible; seeking solo, associate, group or institutional practice; Available July 1973. LW-4/19

Age 32; Temple University, 1966; National Board, Board eligible; seeking group practice; Available late summer 1973. LW-4/19

Age 38, Ohio State University, 1963; National Board, Board eligible; seeking group or institutional practice; Available September, 1973. LW-4/22

Age 31; Vanderbilt University, 1967; National Board, Board eligible; seeking associate or group practice; Available July 1973. LW-4/23

Neurology

Age 30; Northwestern University, 1967; National Board; Board eligible; seeking solo, associate, or group practice; Available June 1973. LW-5/1

Age 28; University of Pennsylvania, 1969; National Board, Board eligible; seeking associate or group practice. LW-5/6

Ophthalmology—

Age 31; Chicago Medical School, 1966; National Board; seeking associate or group practice; Available July, 1973. LW-6/6

Age 31; Bowman Gray, 1967; Board eligible; seeking solo, associate or group practice; Available June 30, 1973. LW-6/10

Age 31; S.U.N.Y., Downstate Medical School 1966; National Board, Board certified; seeking solo or group practice; Available July 1973. LW-6/19

Orthopedic Surgery—

Age 31; University of Alabama, 1966; National Board; Available July, 1973. LW-14/4

Age 31; Baylor, 1966; Board eligible; seeking associate practice; available July, 1973. LW-14/5

Age 30; University of Illinois, 1967; Board eligible; seeking group or associate practice; Available June 1974. LW-14/8

Age 38; Loyola University, 1959; Board eligible; seeking solo or associate practice; Available December 1972. LW-14/9

Age 34; University of Michigan, 1964; Board eligible; seeking solo, associate, group or industrial practice; Available January 1974. LW-14/20

Age 32; Emory University, 1966; Board eligible; seeking associate or group practice; Available August 1973. LW-14/21

Otolaryngology—

Age 30; Medical College of Georgia, 1966; Board certified; seeking solo, associate or group practice; Available summer, 1973. LW-16/3

Age 30; Creighton Medical College, 1966; National Board, Board certified; seeking solo, associate or group practice; Available July 1973. LW-16/4

Pathology—

Age 32; Bowman Gray School of Medicine, 1965; Board certified; seeking Hospital practice with or without associate. LW-8/12

Age 36; Creighton University, 1967; National Board, Board eligible; seeking solo, associate or group practice; Available December 1972. LW-8/15

Pediatrics

Age 30; Kansas University, 1968; National Board, Board eligible; seeking associate or group practice; Available August 1973. LW-9/9

Radiology—

Age 43; Univ. of Tennessee, 1962; Available July 1, 1973. LW-10/10

Age 33; Univ. of Kentucky, 1966; Board eligible; seeking solo, associate, or group practice; Available November, 1972. LW-10/11

Surgery—

Age 33; University of Maryland, 1965; seeking solo, group, or associate practice; Available July 1973. LW-11/7

Age 35; Univ. of Oklahoma, 1964; Board eligible; seeking associate or group practice; Available Jan. 1, 1973. LW-11/14

Age 42; Tulane University, 1955; Board certified; seeking associate, group or industrial practice; Available January 1973. LW-11/16

Urology—

Age 36; Louisiana State University Medical School, 1961; Board eligible; seeking associate practice; Available December, 1972. LW-12/4

Age 35; Univ. of Miami, 1964; National Board; Board eligible; seeking associate, group, or institutional practice; Available Jan. 1973. LW-12/5

Age 32; University of Kentucky, 1968; Board eligible; seeking solo, Associate or group practice; Available July 1973. LW-12/8

Age 32; University of South Carolina, 1966; Board eligible; seeking associate or group practice; Available August 1973. LW-12/9

Physicians Wanted

Special Openings—

Wanted, qualified physicians in either OB-GYN, Internal Medicine, or Thoracic Vascular Surgery, to practice with group clinic. The clinic is a 16 man multi-specialty group, and is located in a city of 35,000 with a trade area of 160,000. Excellent recreational facilities and educational opportunities in the area. PW-14

Opportunity for Internist, Board Certified or eligible, interested in Cardiology, in town of 11,000 population—service area 40,000—south Alabama. Modern 86-Bed (JCAH) general hospital with 8-Bed Combination Intensive and Coronary Care Unit under construction. Seven GP's, Certified Surgeon, Radiologist—excellent city school system. PW-15

Internists—one or two needed in University town of 40,000 plus population in Southeast Alabama—Young vigorous multi-specialty group—Generous initial salary and early partnership. PW-16

Internists, Board-certified or eligible. One needed now and another in 1 or 2 years. For early partnership with internist in south Alabama city of 40,000 plus population. New office building adjacent to 181-bed hospital. Practice largely hospital in-patient and Cardiology. PW-21

Opportunity for a Board certified or eligible surgeon to be associated with a Board surgeon in city of 150,000 population. PW-21/1

General Practitioner or Internist for associate or separate practice in Birmingham. Modern office space and excellent hospital facilities. PW-26

Internist wanted, Board certified, Town of 10,000 population, Southwest Alabama. New 51-bed general hospital, I.C.U. Physicians: 5 GP's, Certified Surgeon and Radiologist. Within easy access, excellent fresh and salt water fishing, hunting including deer and turkey. Public and private schools. One hour drive from two metropolitan areas. PW-18

Wanted, internists, generalists, radiologist, orthopedist, general surgeons, town of 15,000 population in county of 45,000 population in southeast Alabama. Attractive for a group setup. High income area and marked scarcity of physicians. Excellent schools and recreational facilities. Newly expanded hospital. PW-17

Wanted: Immediately. Pediatrician to replace recently deceased partner in northeast Alabama. Enter busy practice in a predominantly GP area. Enjoy rural, quiet living with nearby scenic and recreational facilities. Salary, practice, everything negotiable. PW-19

(Continued on Page 373)

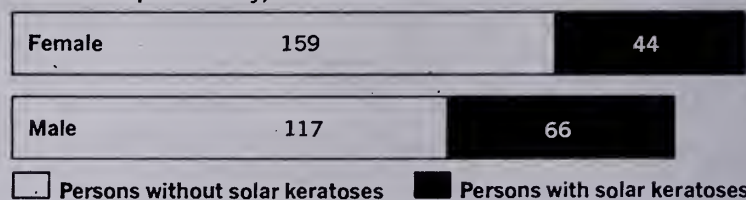
What it means to live and work in Tipton County, Tennessee

**Persons who are white and
over 40 have one chance in four
of having solar keratoses...
which may be premalignant**

An epidemiologic study* conducted in Tipton County, Tennessee, revealed that 28.5% of white persons over 40 had solar keratoses; most had multiple lesions. Cluster sampling projected an estimated prevalence of 32.5% for white males and 19.5% for white females.

Though this is an unusually high percentage of affected persons, these lesions can occur in any white population, wherever people work or play out of doors.

**Prevalence of solar keratoses in white persons
over 40 in Tipton County, Tennessee**



*Data on file, Hoffmann-La Roche Inc., Nutley, New Jersey.



Solar, actinic, senile keratoses

Called by many names, the typical lesion is flat or slightly elevated, brownish or reddish in color, papular, dry, adherent, rough, sharply defined; usually multiple lesions, chiefly on exposed portions of the skin.

Sequence/selectivity of response

Erythema in areas of lesions may begin after several days of therapy; height of reaction (usually in affected areas)* usually occurs within two weeks, declining after discontinuation of therapy. Since this response is so predictable, lesions that do not respond should be biopsied to rule out the presence of a frank neoplasm.

Cosmetic results

Cosmetic results are highly favorable. Incidence of scarring is low—important with multiple facial lesions. Efudex should be applied with care near the eyes, nose and mouth.

5% cream—a Roche exclusive

Only Roche formulates the 5% cream... high in patient acceptability... high in clinical efficacy, especially for lesions of hands and forearms... economical.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Multiple actinic or solar keratoses.

Contraindications: Patients with known hypersensitivity to any of its components.

Warnings: If occlusive dressing used, may increase inflammatory reactions in adjacent normal skin. Avoid prolonged exposure to ultraviolet rays. Safe use in pregnancy not established.

Precautions: If applied with fingers, wash hands immediately. Apply with care near eyes, nose and mouth. Lesions failing to respond or recurring should be biopsied.

Adverse Reactions: Local—pain, pruritus, hyperpigmentation and burning at application site most frequent; also dermatitis, scarring, soreness and tenderness. Also reported—insomnia, stomatitis, suppuration, scaling, swelling, irritability, medicinal taste, photosensitivity, lacrimation, leukocytosis, thrombocytopenia, toxic granulation and eosinophilia.

Dosage and Administration: Apply sufficient quantity to cover lesion twice daily with nonmetal applicator or suitable glove. Usual duration of therapy is 2 to 4 weeks.

How Supplied: Solution, 10-ml drop dispensers—containing 2% or 5% fluorouracil on a weight/weight basis, compounded with propylene glycol, tris(hydroxymethyl)amino-methane, hydroxypropyl cellulose, parabens (methyl and propyl) and disodium edetate.

Cream, 25-Gm tubes—containing 5% fluorouracil in a vanishing cream base consisting of white petrolatum, stearyl alcohol, propylene glycol, polysorbate 60 and parabens (methyl and propyl).

an alternative to conventional therapy **Efudex[®]** (fluorouracil) cream/solution



Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110



ALCOHOLISM DRUG ADDICTION AND OTHER DRUG DEPENDENCY CONDITIONS

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Luxurious Homelike Atmosphere

A unique original program of recovery with a different approach.

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(912) 764-6236

John Mooney, Jr., M. D.
Medical Director

Dorothy R. Mooney
Administrator

Member Georgia Hospital Association



Nose clear all knight

For upper respiratory allergies and infections including the common cold, Dimetapp Extentabs® effectively relieve the stuffiness, drip and congestion all night and all day long on just one Extentab every 12 hours. For most patients drowsiness or overstimulation is unlikely.

**Dimetapp
Extentabs®**

Dimetane® (brompheniramine maleate), 12 mg . phenylephrine HCl, 15 mg . phenylpropanolamine HCl, 15 mg

INDICATIONS: Dimetapp Extentabs are indicated for symptomatic relief of allergic manifestations of upper respiratory illnesses, such as the common cold, seasonal allergies, sinusitis, rhinitis, conjunctivitis and otitis. In these cases it quickly reduces inflammatory edema, nasal congestion and excessive upper respiratory secretions, thereby affording relief from nasal stuffiness and postnasal drip.

CONTRAINDICATIONS: Hypersensitivity to antihistamines of the same chemical class. Dimetapp Extentabs are contraindicated during pregnancy and in children under 12 years of age. Because of its drying and thickening effect on the lower respiratory secretions, Dimetapp is not recommended in the treatment of bronchial asthma.

Also, Dimetapp Extentabs are contraindicated in concurrent MAO inhibitor therapy.

WARNINGS: *Use in children:* In infants and children particularly, antihistamines in overdosage may produce convulsions and death.

PRECAUTIONS: Administer with care to patients with cardiac or peripheral vascular diseases or hypertension. Until the patient's response has been determined, he should be cautioned against engaging in operations requiring alertness such as driving an automobile, operating machinery, etc. Patients receiving antihistamines should be warned against possible additive effects with CNS depressants such as alcohol, hypnotics, sedatives, tranquilizers, etc.

ADVERSE REACTIONS: Adverse reactions to Dimetapp Extentabs may include hypersensitivity reactions such as rash, urticaria, leukopenia, agranulocytosis and thrombocytopenia; drowsiness, lassitude, giddiness, dryness of the mucous membranes, tightness of the chest, thickening of bronchial secretions, urinary frequency and dysuria, palpitation, hypotension/hypertension, headache, faintness, dizziness, tinnitus, incoordination, visual disturbances, mydriasis, CNS-depressant and (less often) stimulant effect, anorexia, nausea, vomiting, diarrhea, constipation, and epigastric distress.

HOW SUPPLIED: Light blue Extentabs in bottles of 100 and 500.

A-H-ROBINS

A.H. Robins Company
Richmond, Va. 23220



**for
today's
pain...**

**memory of
yesterday's
pain...**

**apprehension over
tomorrow's
pain—**


For the patient with a terminal illness, PAIN past, present, and future can dominate his thoughts until it becomes almost an obsession. The more he is aware of the pain he is now experiencing, the more difficult it is to erase his memory of yesterday's pain, and to allay his fearful anticipation of tomorrow's pain. Surely the last thing this patient needs is an analgesic containing caffeine to stimulate the senses and heighten pain awareness. A far more logical choice is Phenaphen with Codeine. The sensible formula provides $\frac{1}{4}$ grain of phenobarbital to take the nervous "edge" off, so the rest of the formula can help control the pain more effectively. Don't you agree, Doctor, that psychic distress is an important factor in most of your terminal and long-term convalescent patients?

the analgesic formula that calms instead of caffeinates

Phenaphen[®] with Codeine

Phenaphen with Codeine No. 2, 3, or 4 contains: Phenobarbital ($\frac{1}{4}$ gr.), 16.2 mg. (warning: may be habit forming); Aspirin ($2\frac{1}{2}$ gr.), 162.0 mg.; Phenacetin (3 gr.), 194.0 mg.; Codeine phosphate, $\frac{1}{4}$ gr. (No. 2), $\frac{1}{2}$ gr. (No. 3) or 1 gr. (No. 4) (warning: may be habit forming).

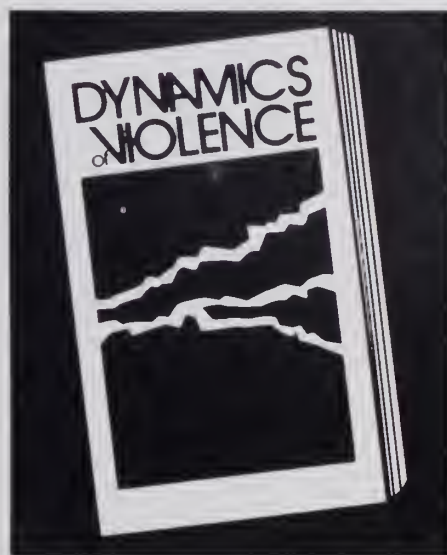
Indications: Provides relief in severer grades of pain, on low codeine dosage, with minimal possibility of side effects. Its use frequently makes unnecessary the use of addicting narcotics. **Contraindications:** Hypersensitivity to any of the components. **Precautions:** As with all phenacetin-containing products, excessive or prolonged use should be avoided. **Side effects:** Side effects are uncommon although nausea, constipation and drowsiness may occur. **Dosage:** Phenaphen No. 2 and No. 3—1 or 2 capsules every 3 to 4 hours as needed; Phenaphen No. 4—1 capsule every 3 to 4 hours as needed. For further details see product literature.

 Phenaphen with Codeine is now classified in Schedule III, Controlled Substances Act of 1970. Available on written or oral prescription and may be refilled 5 times within 6 months, unless restricted by state law.

A. H. Robins Company, Richmond, Virginia

DYNAMICS of VIOLENCE

Brief, brilliant studies drawn from a close, often painful scrutiny of human violence



Jan Fawcett's superbly edited book takes you on an exploration into this age of violence. Nightmarish cases from contemporary history...war, bombings, assassination, mass murder, rape, arson, riots...are the backdrops against which eminent psychiatrists discuss violence and aggression.

Immensely revealing and readable, Dynamics of Violence examines violent aggression in terms of historical and social dimensions in our national history, clinical case studies of violent individuals, and clinical research investigations.

Order your copy today! Send your remittance to the American Medical Association, 535 N. Dearborn St., Chicago, Ill. 60610.

SMJ 11/72

Send me _____ copy(s) of Dynamics of Violence priced at \$3.95. (OP-240.) My payment of \$ _____ is enclosed.

Name _____

Address _____

City/State/Zip _____



When you select this familiar antibiotic for IV infusion you have available a broad dosage range that hospitalized patients may need.

Intravenous Lincocin (lincomycin hydrochloride, Upjohn), with its 1.2 to 8 grams/day dosage range, covers many serious and even life-threatening infections. Lincocin is effective in infections due to susceptible strains of streptococci, pneumococci, and staphylococci. Lincocin IV therefore can be as useful in your hospitalized patients as its IM use has proved to be in your office patients. As with all antibiotics, *in vitro* susceptibility studies should be performed.

1.2 to 8 grams/day IV dosage range:

Most hospitalized patients with uncomplicated pneumonias respond satisfactorily to 1.2 to 1.8 grams/day of Lincocin IV. These doses may have to be increased for more serious infections.

In life-threatening situations as much as 8 grams/day has been administered intravenously to adults.

In usual IV doses, Lincocin (lincomycin hydrochloride, Upjohn) should be diluted in 250 ml or more of normal saline solution or 5% glucose in water. But when 4 grams or more per day is given, Lincocin should be diluted in no less than 500 ml of either solution, and the rate of administration should not exceed 100 ml/hour. Too rapid intravenous administration of doses exceeding 4 grams may result in hypotension or, in rare instances, cardiopulmonary arrest.

Effective gram-positive antibiotic:

Lincocin IV is effective in respiratory tract, skin and soft-tissue, and bone



fections caused by susceptible strains of pneumococci, streptococci, and staphylococci, including penicillin-resistant strains. Staphylococcal strains resistant to Lincocin (lincomycin hydrochloride, Upjohn) have been covered. Before initiating therapy, culture and susceptibility studies should be performed. Lincocin has proved valuable in treating patients hypersensitive to penicillin or cephalosporins, since Lincocin does not share antigenicity with these compounds. However, hypersensitivity reactions have been reported, some of these in patients known to be sensitive to penicillin.

Well tolerated at infusion site: Lincocin intravenous infusions have not produced local irritation or phlebitis, when given as recommended. Lincocin is usually well tolerated in patients who are hypersensitive to other drugs. Nevertheless, Lincocin should be used cautiously in patients with asthma or significant allergies.

In patients with impaired renal function, the recommended dose of Lincocin could be reduced to 25–30% of the dose for patients with normal kidney function. Its safety in pregnant patients and in infants less than one month of age has not been established.

Lincocin may be used with other antimicrobial agents: Since Lincocin is stable over a wide pH range, it is suitable for incorporation in intravenous infusions; it also may be

administered concomitantly with other antimicrobial agents when indicated. However, Lincocin should not be used with erythromycin, as *in vitro* antagonism has been reported.

Lincocin[®]
Sterile Solution (300 mg per ml)
(lincomycin hydrochloride, Upjohn)
For further prescribing information, please see following page.





Sterile Solution (300 mg. per ml.)

Lincocin[®]

(lincomycin hydrochloride, Upjohn)

Up to 8 grams per day by IV infusion for hospitalized patients with life-threatening infections.

Lincocin is effective in infections due to susceptible strains of streptococci, pneumococci, and staphylococci. As with all antibiotics, *in vitro* susceptibility studies should be performed.

Each preparation contains:

Lincomycin hydrochloride monohydrate equivalent to lincomycin base

250 mg Pediatric Capsule 250 mg
500 mg Capsule 500 mg
*Sterile Solution per 1 ml 300 mg
Syrup per 5 ml 250 mg
*Contains also: Benzyl Alcohol 9 mg; and, Water for Injection—q.s.

Lincocin (lincomycin hydrochloride) is indicated in infections due to susceptible strains of staphylococci, pneumococci, and streptococci. *In vitro* susceptibility studies should be performed. Cross resistance has not been demonstrated with penicillin, ampicillin, cephalosporins, chloramphenicol or the tetracyclines. Some cross resistance with erythromycin has been reported. Studies indicate that Lincocin does not share antigenicity with penicillin compounds.

CONTRAINDICATIONS: History of prior hypersensitivity to lincomycin or clindamycin. Not indicated in the treatment of viral or minor bacterial infections.

WARNINGS: CASES OF SEVERE AND PERSISTENT DIARRHEA HAVE BEEN REPORTED AND HAVE AT TIMES NECESSITATED DISCONTINUANCE OF THE DRUG. THIS DIARRHEA HAS BEEN OCCASIONALLY ASSOCIATED WITH BLOOD AND MUCUS IN THE STOOLS AND HAS AT TIMES RESULTED IN AN ACUTE COLITIS. THIS SIDE EFFECT USUALLY HAS BEEN ASSOCIATED WITH THE ORAL DOSAGE FORM BUT OCCASIONALLY HAS

BEEN REPORTED FOLLOWING PARENTERAL THERAPY. A careful inquiry should be made concerning previous sensitivities to drugs or other allergens. Safety for use in pregnancy has not been established and Lincocin (lincomycin hydrochloride) is not indicated in the newborn. Reduce dose 25 to 30% in patients with severe impairment of renal function.

PRECAUTIONS: Like any drug, Lincocin should be used with caution in patients having a history of asthma or significant allergies. Overgrowth of nonsusceptible organisms, particularly yeasts, may occur and require appropriate measures. Patients with pre-existing monilial infections requiring Lincocin therapy should be given concomitant antimonilial treatment. During prolonged Lincocin therapy, periodic liver function studies and blood counts should be performed. Not recommended (inadequate data) in patients with pre-existing liver disease unless special clinical circumstances indicate. Continue treatment of β -hemolytic streptococci infections for 10 days to diminish likelihood of rheumatic fever or glomerulonephritis.

ADVERSE REACTIONS: *Gastrointestinal*—Glossitis, stomatitis, nausea, vomiting. Persistent diarrhea, enterocolitis, and pruritus ani. *Hemopoietic*—Neutropenia, leukopenia, agranulocytosis, and thrombocytopenic purpura have been reported. *Hypersensitivity reactions*—Hypersensitivity reactions such as angioneurotic edema, serum sickness, and anaphylaxis have been reported, sometimes in patients sensitive to penicillin. If allergic reaction occurs, discontinue drug. Have epinephrine, corticosteroids, and antihista-

mines available for emergency treatment. *Skin and mucous membranes*—Skin rash, urticaria, vaginitis, and rare instances of folliculitis and vesiculobullous dermatitis have been reported. *Liver*—Although no direct relationship to liver dysfunction is established, jaundice and abnormal liver function (particularly serum transaminase) have been observed in a few instances. *Cardiovascular*—Instances of hypotension following parenteral administration have been reported particularly after too rapid IV administration. Rare instances of cardiopulmonary arrest have been reported after too rapid administration. If 4.0 grams or more administered IV, dilute in 500 ml of fluid; administer no faster than 100 ml per hour. *Special senses*—Tinnitus and vertigo have been reported occasionally. *Local reactions*—Excellent local tolerance demonstrated intramuscularly administered Lincocin (lincomycin hydrochloride). Reports of following injection have been infrequent. Intravenous administration of Lincocin 250 to 500 ml of 5% glucose in distilled water or normal saline has produced local irritation or phlebitis.

HOW SUPPLIED: 250 mg and 500 mg Capsules—bottles of 24 and 100. Sterile Solution, 300 mg per ml—2 and 10 ml and 2 ml syringe. Syrup, 250 mg per —60 ml and pint bottles.

For additional product information, consult the package insert or see your Upjohn representative.

MFD B-6-S (KZL-7) JA71-

The Upjohn Company
Kalamazoo, Michigan 49001

Upjo

Literary Hemorrhoids

Ms. S.R., 47, high school English teacher. A history of anorectal pain and burning of several years' duration. On and off weight reducing diets, the insufficient bulk of which has aggravated a chronic constipation problem. Subsequent straining at stool has precipitated an acute episode of internal-external hemorrhoids.



a typical
proctological
patient

to help
relieve the pain,
itching,
burning associated
with this and
similar anorectal
conditions

prescribe

**Anusol-
HC**[®] hemorrhoidal
suppositories
with hydrocortisone
acetate

Each suppository contains hydrocortisone acetate 10 mg, bismuth subgallate 2.25%, bismuth resorcin compound 1.75%, benzyl benzoate 1.2%, Peruvian balsam 1.8%, zinc oxide 11.0%, and boric acid 5.0%, plus the following inactive ingredients: bismuth subiodide, calcium phosphate, and coloring in a bland hydrogenated vegetable oil base.

Precaution Prolonged or excessive use of Anusol-HC might produce systemic corticosteroid effects. Symptomatic relief should not delay definitive diagnosis or treatment.

Dosage and Administration Anusol-HC: One suppository in the morning and one at bedtime for 3 to 6 days or until the inflammation subsides. Regular Anusol: One suppository in the morning, one at bedtime, and one immediately following each evacuation.

And for long-term
patient comfort...recommend

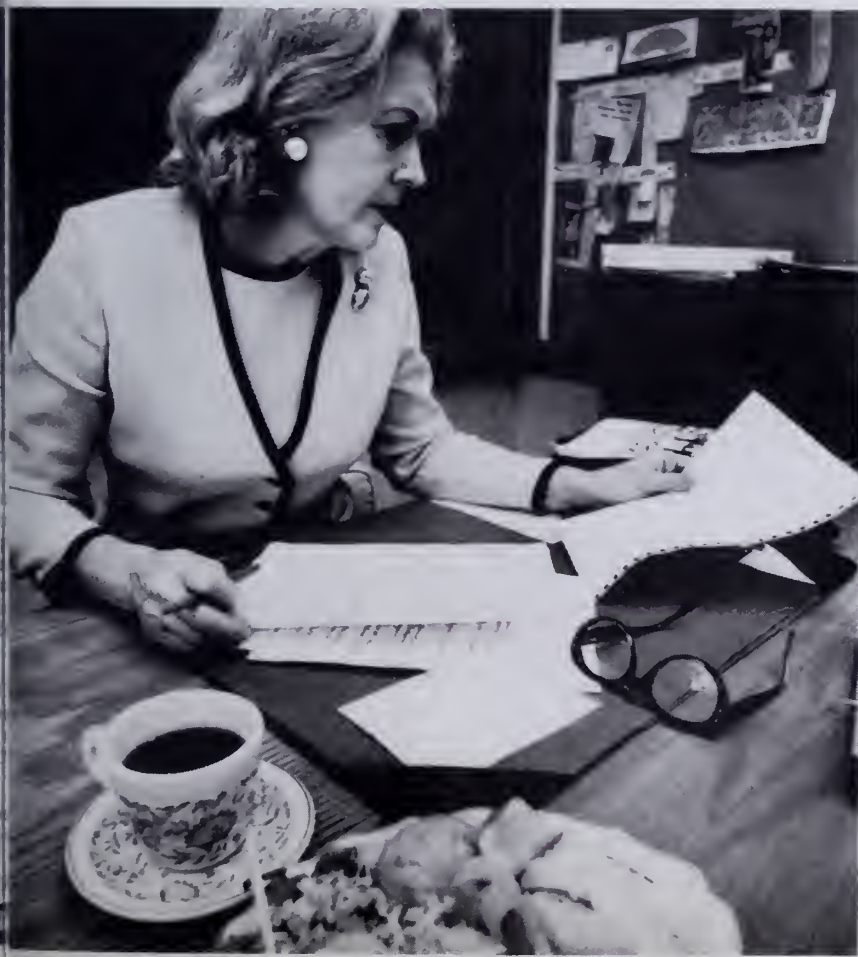
Anusol[®] hemorrhoidal
suppositories.

Each suppository contains
the ingredients of
Anusol-HC without the
hydrocortisone.



Warner-Chilcott

Division, Warner-Lambert Company
Morris Plains, New Jersey 07950
ANGP-23 Rev.





Antivert[®] (meclizine HCl) for vertigo*

...and then on to Venice

Indicated in the management of nausea, vomiting and dizziness associated with motion sickness.

Found useful in the management of vertigo associated with diseases affecting the vestibular system.

Available as Antivert[®] (12.5 mg. meclizine HCl) blue and white scored tablets and also as Antivert[®]/25 (25 mg. meclizine HCl) yellow and white scored tablets.

***INDICATIONS.** Based on a review of this drug by the National Academy of Sciences-National Research Council and/or other information, FDA has classified the indications as follows:

Effective: Management of nausea and vomiting and dizziness associated with motion sickness.

Possibly Effective: Management of vertigo associated with diseases affecting the vestibular system.

Final classification of the less than effective indications requires further investigation.

CONTRAINDICATIONS. Administration of Antivert during pregnancy or to women who may become pregnant is contraindicated in view of the teratogenic effect of the drug in rats.

The administration of meclizine to pregnant rats during the 12th-15th day of gestation has produced cleft palate in the offspring. Limited studies using doses of over 100 mg./kg./day in rabbits and 10 mg./kg./day in pigs and monkeys did not show cleft palate. Congeners of meclizine have caused cleft palate in species other than the rat.

Meclizine HCl is contraindicated in individuals who have shown a previous hypersensitivity to it.

WARNINGS. Since drowsiness may, on occasion, occur with use of this drug, patients should be warned of this possibility and cautioned against driving a car or operating dangerous machinery.

Usage in Children: Clinical studies establishing safety and effectiveness in children have not been done; therefore, usage is not recommended in the pediatric age group.

Usage in Pregnancy: See "Contraindications."

ADVERSE REACTIONS. Drowsiness, dry mouth and, on rare occasions, blurred vision have been reported.

ROERIG *Pfizer*

A division of Pfizer Pharmaceuticals
New York, New York 10017



Hill Crest HOSPITAL

For Intensive Treatment of Psychiatric Disorders

This 113-bed non-governmental psychiatric hospital provides modern facilities for diagnosis and treatment of patients with all degrees of illness, including those who show severely disturbed behavior. Alcoholic and drug abuse patients are also accepted.

In addition to care by psychiatrists and by consultants in all medical specialties, the treatment program includes occupational, recreational, and physical therapy, social services, and tutoring. Emphasis is on short-term, intensive treatment of voluntary patients.

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ADMINISTRATOR:

Robert V. Sanders

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"The history of science, and in particular the history of medicine... is... the history of man's reactions to the truth, the history of the gradual revelation of truth, the history of the gradual liberation of our minds from darkness and prejudice."

— George Sarton, from "The History of Medicine Versus the History of Art"

Are combination drug products useful in treatment involving concomitant use of two or more drugs?

Opinion

Results of a questionnaire to 7,000 physicians:

62.9%

Believe combination drug products are useful.

13.8%

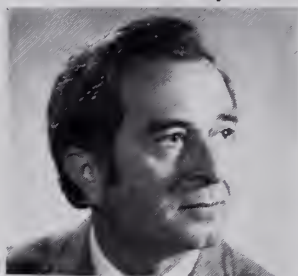
Do not believe combination drug products are useful.

Are combination drug products useful in treatment involving concomitant use of two or more drugs

Opinion & Dialogue

Doctor of Medicine

Louis Lasagna, M.D.
Professor and Chairman
Department of
Pharmacology & Toxicology
University of Rochester
School of Medicine
and Dentistry



Obviously, many drugs are given concomitantly. Whether it makes sense to combine medications in one preparation, be it capsule, tablet, or liquid, is a question that can be answered only by examining the advantages and disadvantages in the individual case.

Among the advantages is, first of all, convenience. The more medications that are taken concurrently and the more complicated the directions, the less likely the patient is to take medications accurately. From the standpoint of convenience and accuracy, and economy as well, you can make an important case for putting medications together in one preparation, as long as they are compatible.

By the same token, when you prescribe a properly tested and rational combination, you should have less worry about pharmaceutical or pharmacological compatibility — and about reasonable dosage ratios as well. Compatibility of the formulation should be demonstrated in the laboratory and clinic before the product is available for prescription—which is more than can usually be said for

the physician's own spontaneous creations. And, the dosage ratios employed in rational precompounded combinations are designed to meet the needs of substantial numbers of "typical" patients.

There is no doubt that many "atypical" patients are to be found, and for them the prefabricated combination must be rejected. But that hardly argues for eliminating rational combinations from the market. Think, for example, of the problems that would arise if the components of widely accepted combinations, like the oral contraceptives and the diuretic-antihypertensives, always had to be prescribed, purchased and ingested separately.

One disadvantage that comes to mind is some doctors' unawareness of the ingredients a given combination contains. For example, a doctor might know that a patient is allergic to aspirin but forget that a certain analgesic mixture, which he knows only by its trade name, contains aspirin. His prescription, then, causes considerable discomfort, to say the least. This problem is a function of physician education, rather than of combination therapy as such. Improving doctors' knowledge about all medicaments they prescribe is a problem that deserves tackling on its own.

Another accusation leveled at combination drugs is that they encourage sloppiness of diagnosis and treatment. In many cases, however, a combination may prove to be the most effective choice. A good ex-

ample of the usefulness of combinations appears in a recent article in the *Journal of Chronic Diseases* on the efficacy and side effects of an antihypertensive containing three ingredients, in which the track records of the combination drug and the individual ingredients were compared. Interestingly enough, whether the drugs were given individually or together, incidence and severity of side effects were the same. But blood pressure control was invariably better when the drugs were taken in one combination tablet than when they were taken separately (in "titratable" dosage) or in two or three different tablets.

Deciding which combinations constitute rational therapy obviously leads to a discussion of who is to determine which should be used and which should not. Realistically, I think combinations should be evaluated somewhat differently if they are old and established or new and untried.

In today's regulatory atmosphere, there is no possibility of a new combination being put on the market without a substantial amount of acceptable evidence in the form of controlled trials that show it to be safe and efficacious. On the other hand, I believe a different set of standards should apply to combination preparations that have been around for a long time. In other words, physician acceptance over a long period should be given some weight as evidence of the efficacy and safety of these drugs.

The FDA, however, does not seem to share this attitude. It often requires, for these older products, controlled trials that will monopolize the time of already overtired investiga-

tors and cost a great deal of money. I wish we could agree on a "grandfather clause" approach to preparations that have been in use for a number of years that have an apparently satisfactory track record.

For example, I think some of the antibiotic combinations that were taken off the market by the FDA were performed quite well. I'm thinking particularly of penicillin-streptomycin combinations that patients—especially surgical patients—were given in injection. This made less discomfort for the patient, less demand on nurses' time, and fewer opportunities for drug errors. To take such preparation off the market doesn't seem to be good medicine, unless actual evidence showed a great deal of harm from the injection (rather than the pill use) of the combination.

The point that should be emphasized is that there are both rational and irrational combinations. The real question is, who is to determine which is which? Obviously, the FDA plays a major role in making this determination. In fact, I don't think I can avoid taking the ultimate responsibility, but I enlist the help of our physicians and experts in assessing the evidence in making the ultimate decision.

Maker of Medicine

W. Clarke Wescoe, M.D.
President
Winthrop Laboratories



If two medications are used effectively to treat a certain condition, and it is known that they are compatible, it clearly is useful and convenient to provide them in one dosage form. It would make no sense, in fact it would be pedantic, to insist they always be prescribed separately. To avoid the appearance of pedantry, the "expert" derides the combination because it is a fixed dosage form. When the "expert" invokes the concept of fixed dosage form he obscures the fact that single-ingredient pharmaceutical preparations are also fixed dosage forms. By a singular semantic exercise he implies a pejorative meaning to the term "fixed dose" only when he uses it with respect to combinations. What is ignored is the simple fact that only in the rarest of circumstances does any physician attempt to titrate an exact therapeutic response in his patient. It is quite possible that some aches and pains will respond to 500 mg. of aspirin yet that fact does not militate against the usual dose being 650 mg.

The other semantic ploy often called into play is to describe a combination product as rational or irrational.

Take antibiotic mixtures, the source of much of the criticism generated against

combinations generally. Obviously, no one should be exposed willy-nilly to the potential side effects of two or three antibiotics when only one is needed. At the same time there are cases where it is prudent to prescribe more than one. The clinician is the judge in these circumstances, as he should be.

There is no clear definition of the word rational. Most persons, I suppose, would find it synonymous with reasonable, but in many circumstances it may best be defined as the opinion of those in power at the moment.

Other factors govern combination therapy, not the least of which has been its broad use by practicing physicians anxious to achieve convenience in prescribing, to reduce medication error, and to save money for their patients. Combinations clearly have met the test on all three counts.

I have been impressed by studies showing that the rate of error climbs markedly with the number of medications to be taken, even with sophisticated patients. When medically justified, therefore, this factor alone supports the logic of combination therapy.

The cost argument for combinations appears to be irrefutable. In 1971, R. A. Gosselin studied the 71 combination products (excluding oral contraceptives) among the 200 most prescribed drugs. The study found that if all 71 products were discontinued, and if each ingredient in these combinations were prescribed separately, the price of medicines to patients would jump by \$443.2 million on a national basis! At a time when the cost of medical care is under so much fire, it would be nonsensical to boost costs without clearly irre-

futable medical reasons.

The part played by government on this question, of course, is fundamental. The FDA should play a role in determining which combinations are reasonable. That role, as defined by law and regulation, is to ensure that any medication on the market is safe and effective in line with its label claims. Certainly combinations are entitled to as much consideration as single entities—neither more nor less. So long as the addition of one drug to another does not make either less safe, or less effective, so long as they are compatible in a formulation, we have a reasonable product. It makes no sense to recommend the use of two products for certain conditions and to deny their being combined in a single form. An unhappy side effect of the problem concerns the efficacy panel discussions of many products submitted for review. The term "effective, but" has been freely interpreted to mean "ineffective" in toto, regardless of the merit of the individual drugs. This interpretation has placed numerous useful combination products in needless jeopardy.

In reading the actual reports of the review panels, it seems clear that some of the ratings were based less on scientific research and clinical observation than on the "informed" opinions of the panelists. These "informed" opinions were accepted at face value, while

the "informed" opinions of others who had used the products were rejected. All of this put combination products into a sort of scientific never-never land.

It should be kept in mind by all, government as well as others involved in our health care system, that advances in therapy are seldom made in leaps and bounds but rather by small painstaking steps—and that some of these steps have resulted from research in combination drugs as well as with single entities. Given the near-infinite biologic variation in patient response, this is hardly surprising to clinicians. It should not be to regulatory agencies either.

In the end, the practicing physician is in the best position to decide if a particular combination makes sense. Such a decision should not be made exclusively by those whose responsibility for continuing clinical care is limited. Clinicians are the best judges of efficacy because the ultimate proof of any product's effectiveness is acceptance by physicians who have observed its actions in patients over time. The corollary statement may be made about over-the-counter medicines, which would not long survive if they failed to afford the relief the user anticipates. That the antihistamine in a "cold" remedy may not *always* be necessary is no reason to proscribe the combination generally.

Opinion & Dialogue

What is your opinion, doctor?

We would welcome your comments.



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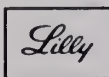
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Peer Review

Leon C. Hamrick, M. D.

Fairfield, Alabama

As has been indicated on many occasions, peer review is not new. It has been around as long as medicine and has been applied in many ways. Examinations by licensure and examining boards, selection and acceptance of hospital staffs and committees, relationship of associates and partners and staff to house staff, consultants in radiology, pathology, and others for clinical problems in diagnosis and therapy are all forms of peer review. The apparent newness about it is in the newness of terminology which arose with the requirements of establishing functional review committees by Medicare and Medicaid legislation.

It is apparent that the maintenance of in-hospital quality care has long been a function maintained through staff membership and delineation of privileges and through memberships of practitioners in specialty groups. At one time, not so long ago, one might logically have assumed that the major thrust of review of the quality of care by legislation was aimed at this, the in-hospital care, portion of our practice. However, the time for realization that this is no longer necessarily so is upon us. Individual patterns of outpatient care (as related to charges) have been established by agencies and carriers and to a refined degree. Computerized tallies on number of prescriptions written by individuals and totals written even for specific drugs are pointed examples. Such data is not difficult

to collect, store, and apply to varied usage in this electronic era.

That the overwhelming majority of physicians in practice strive to do a good job in delivering medical care both within and without the hospital should be without question. Our real problem comes in properly documenting the essentials of patient care so that the information continues to be a useful tool for those of us and others involved in the care of the patient and for those who for any reason, including peer review, find it necessary to evaluate this information.

Rather than to continue with a discussion of review mechanisms in the individual hospital, allow me in a brief way to tell you of some of the mechanisms and problems at State levels.

In this regard, there are two directions of review in Alabama—Blue Cross-Blue Shield's and the State Medical Association's.

The review mechanism sponsored by the medical Association of the State of Alabama has been published and made available to insurance carriers and physician members of the Association. These are available from the central office of the Medical Association and spell out proper notice of time for review, appeal mechanism, quorum, etc.

The mechanism provides for adjudicating (through 20 district committees) disputes re-

lating to charges made for medical/surgical services, utilization of hospital, nursing home, laboratory, drug prescriptions, and other medical/surgical services which may arise between physician members of the State Medical Association and third party payors of benefits.

The complainant must guarantee to reimburse the State Association its cost in conducting the hearing, and to reimburse the committee members for mileage, secretarial, and incidental expenses.

The request for a review is initiated through the president of the Association who in turn assigns it to the appropriate district committee. The committee, after the hearing, sends a report to the president of the Association who in turn sends the findings and decision to both parties.

Appeals may be made to the State Association's Board of Censors which may designate a State Peer Review Committee to hear the appeal if one is justified. The committee in turn would report its findings to the State Board of Censors whose decision is then final and binding on all parties.

Since the establishment of this peer review mechanism just over two years ago, about 25 cases annually have been heard. Most of these are landmark cases and in 80-90 per cent of them the review committee has ruled against the physician. No case has been initiated by a physician.

In Alabama, the most active review is done under the Medicare division of Blue-Cross-Blue Shield. This review mechanism is separate and distinct from the previously mentioned District Peer Review Mechanism sponsored by the State Medical Association.

As an introduction, the following is quoted from a letter mailed in August of this year to Alabama physicians from members of the Medical Review Committee of Blue Cross-Blue Shield.

"The six physicians composing the Medicare Medical Review Committee are appointed by your State Board of Censors.

Their primary duty is to serve on the Blue Shield Executive Committee. However, on a monthly basis the physicians sit as a medical review committee and review problem cases referred by consulting physicians doing daily reviews of Medicare claims. Your committee also issues general and special medical guidelines to be used from day to day by consulting physicians.

"In our practices, we physicians who serve on this board are aware of some of the problems and frustrations that physicians face in serving the Medicare beneficiaries. Therefore, we believe that Alabama physicians should know the basic principles under which the carrier operates in paying *physicians', hospitals', and nursing homes' claims*. *The cardinal principle is that no claim is denied (in whole or in part) until it has been reviewed by one or more qualified physicians, with the full Executive Committee acting as an appeal body.* As a corollary to this principle, physicians and hospitals who do not agree with the decision of the consultants are invited to bring such disagreements to the full committee. For example, if part of a hospital or a physician bill is denied, the hospital or the physician can request review and, if necessary, may appeal personally.

"One frustration we face as practitioners is that we cannot identify with the specific physician who does daily medical review. The Alabama carrier uses physicians in private practice, rather than using a full-time, salaried physician. We agree this produces better medical review. But it has the limitation of non-identity. For the daily consultants to engage in direct conversation with the practicing physicians of the state would consume a great deal of their time, and would also make it difficult to retain well-qualified consultants. The undersigned physicians, as part of their responsibilities, serve as the identifiable physicians in appealed cases."

The review process begins during the manual coding of charges by clerks; guidelines have been developed which point to problem areas such as over utilization, etc., and, when

these are noted, the claim is passed to a nurse for review. Six nurses work full-time in Part A and B Medicare. The nurse may approve a claim for payment but she cannot reject one. If she questions a claim, it is then passed to a physician for informal review. Some 12 physicians work as consultants on a part-time basis. In July of this year, 237 informal reviews were handled.

If an unfavorable decision is reached after proper review, the physician, hospital, or nursing home may request a Fair Hearing. This is held before a Social Security hearing officer—usually an attorney. He may rule in favor of either party.

Of interest, is the number of hearings being held in the Southeast. In July of this year, no hearings were held in Alabama but there were 93 pending. One hundred and eighteen were held in Florida and 1,100 were pending. Thirteen were held in Georgia, three in Mississippi, five in North Carolina, one in South Carolina and four in Tennessee. Of the 93 cases pending in Alabama, only four physicians are involved.

Needless to say, I suspect that once a physician has been pegged as a problem, screening of all his claims is done.

In addition to the above, an additional program called the Program of Integrity is carried out. Guidelines for scrutiny have been developed which include total volume paid

to a physician, services performed outside his type practice, or an unusual high usage on the basis of his qualifications. When a pattern of abuse is pointed to, a statistician develops the number of claims from the physician which would give an accurate survey of his total. Hard copies of claims are then pulled and hospital records are obtained. A nurse reviews these, and as before, may approve them for payment or pass them on to Physician Review. If overuse is determined, repayment, percentage wise, in the amount of overuse is requested. Hospitals may also be requested to refund payments involving overuse. In a recent nationwide report of hospitals reporting retroactive denials of payments, some 27 hospitals reported retroactive denials for 22,632 hospital days, having a dollar value of \$1,805,000.

Knowing all these things, I believe you will agree that facing this problem is mandatory. Discipling ourselves to keep records that can be reviewed and reviewing them fairly and with the intent toward educating each and all of us as to the appropriateness of our care is imperative; and, in order to accomplish review in an acceptable atmosphere, several issues must be faced. These would include orientation of review committees in the purpose of peer review and acquainting them with an understanding of what is usual and customary as pertains to fees and practice, and with statutory and regulatory benefit limitations.

Child Hearing Pamphlet Available

A newborn baby does not act startled when someone claps sharply three to six feet away from him; at three months he does not turn his eyes toward the sound; at about a year he does not turn toward a whispered voice, or the sound of a rattle, even when the sound originates three feet behind him—these are a few of the danger signals of hearing abnormality, described in **HELPING THE CHILD WHO CANNOT HEAR**, a new Public Affairs Pamphlet.

The author explains why it is imperative that parents recognize these danger signals and seek early diagnosis and treatment for their offspring. He discusses the causes of hearing loss, how a diagnosis is made, where parents can go for medical help and counseling, and the kinds of educational methods available. **HELPING THE CHILD WHO CANNOT HEAR** is available for 35 cents from the Public Affairs Committee, 381 Park Avenue South, New York, N. Y. 10016.

A Psychiatrist Raises The Devil

Wallace Marshall, M. D.*

Montgomery, Alabama

*"Oh, shame to men! Devil with devil
damned Firm concord holds, men only dis-
agree of creatures rational."*

Paradise Lost—Milton

It has always interested me to ascertain just why mankind has employed the Devil concept to explain certain behavior, rational or otherwise. It is not intended to make a comprehensive inquiry into the theologic aspects of this subject nor to pass judgment. An attempt will be presented to link the Devil concept to some aspects of antisocial human behavior from Freudian and psychoimmunologic constructs, with emphasis on the latter viewpoint, after a short review is made as to the etiology of Satan.

Probably from the beginning of mankind there have been "the good guys" versus "the bad guys." Perhaps this concept reached its peak in the western movies where "the good guys" or heroes wore white hats and their adversaries donned black hats. Simply stated, right prevailed over wrong, for the heroes usually vanquished their wary opponents, the villains, with great dispatch and with no little fanfare. Evidentially the movie going public enjoyed these spectacles immensely, for their previous religious education accentuated the inevitable outcome from such conflicts, which previously had been described in detail from countless pulpits throughout the land and abroad!

The origin of the concept involving the Devil is interesting. Satan is another name for the Devil. The Persian counterpart is Ahriman who was the opponent of Ormuzd or Ahura Mazda, the good one. This dualistic belief of good versus bad, infiltrated Semitic philosophy, where the bad one tempted, accused and punished those who had trans-

gressed. These beliefs later permeated Christian thought where the concept of the serpent became identified with the Devil or Satan. Obviously, this evil one became the enemy of God. Judeo-Christian theology, during the Middle Ages, began identifying the Devil as having the odor of brimstone, also with cleft hoofs and a forked tail.¹

Luther claimed that Satan plied his evil procedures so that the world would pass away with its pleasures, since no improvement could take place because of Satan's presence.² Of rather recent date, theologians have differed in their interpretations which involve the Devil concept. Some defend the biblical interpretation, while others have taken a more liberal approach in that sin is applicable only to sinners who have so acted. Hence, Satan is opposed to the Creator; the former will be defeated by moral means. In summary then, the belief in the Devil is not presently essential to Christian doctrine, nor is it supposed to be indispensable in experiencing Christianity, according to modern Christian theology.

After questioning several pastors, their answers bore out the above salient points. Those clergymen who followed the Bible verbatim, defended the Devil concept to the hilt, while the more liberal colleagues gave free interpretations about Satan.

The Freudian view

Whether or not one accepts Freudian doctrine as the gospel, one must admit that during the time of its formulation, no adequate personality theory existed. Later, this state was rectified by the brilliant studies made by Piaget in his consuming studies of his children's development about their individual personalities.

Recently, I attempted to explain Freudian theorizing, regarding personality develop-

*Professor of Psychology, Auburn University at Montgomery.

ment³ in biologic terms. According to Freud, the Id originates certain crude forces which play upon the Ego, which in turn attempts to control the individual's behavior along more socially acceptable lines. The Superego, representing those forces emanating from one's environment (as from peers, parents and teachers), also tend to check the final behavior of the Ego. In other words, the Superego functions as the individual's forces which are derived from parental and societal influences. This acts as the child's conscience and moral sense.

Perhaps you may recall TV star Flip Wilson's famed line "The Devil made me do it." This denotes an unbridled impulse or impulses which originate within the Id and bear upon the Ego. Should the subsequent behavior of the individual prove to be more or less anti-social, then one may reason that such unbridled and asocial reactions were produced by uncontrollable Id impulses. Obviously, the Superego failed in its preventive or modulating reactions on the Ego.

A very simple way to explain this asocial behavior is through the rationalization that evil forces were at work within the Id. These spilled on to the Ego, and some nefarious actions ensued. In other words, the Devil did it; he was the cause. Here we return to the age-old concept of bad or evil versus good (righteousness). These are meta-physical concepts which cannot be related to behavioristic theory and physiologic functions. Hope, faith and charity are similar meta-physical concepts which apparently have no counterparts in scientific terms. Apparently the same impasse exists in the case of Satan or the Devil. Not so, say I, and this is why.

Psycho-immunologic Approach

A previous reference³ stated that the Id originated in the thalamic, subthalamic and the reticuloform bodies and was transmitted to the cerebral cortex, the sites of previous learning from encoding of the various afferent cortical cells. The latter can be regarded as the site of the Freudian Ego, and the ecosystem (stimuli originating from teachers,

parents and peers) can be regarded as the superego. Obviously, learning in any individual is based upon certain neuroelectrochemical imprinting from afferent stimuli on the recipient cortical cells⁴.

As has been stressed repeatedly by this writer, two types of afferent stimuli travel these neural pathways to the brain. It is important to differentiate pleasure producing stimuli from those stimuli which produce pain⁵. Stress was placed on the etiologic point that excessive painful stimuli can produce phobias, whereas excessive pleasurable stimuli tend to cause manias.

Hence, a hypersensitized thalamic or hypothalamic center may generate stimuli which finally produce either pleasurable or painful cerebral encoding in the individual, and the resultant behavior can be regarded by those within one's ecosystem as being either socially acceptable or antisocially oriented. We have really reversed the character producing processes whereby now the individual reacts to his environment. Then one's parents, peers or teachers observe this behavior of the individual, and his actions may produce pain or pleasure or even a combination of both to these observers.

Reducing such physiologic reactions to philosophic terms, a person who produces socially acceptable behavior (resulting in pleasurable stimuli) is often regarded as a "good guy" or even a saint. Whereas an individual who reacts antisocially (produces pain on his ecosystem) is thought as being possessed of the Devil.

In summary, we may state that the motivation for the Devil or the production of devilish behavior originated from a hypersensitized subcortical area in the affected individual because of previous excessive cortical sensitizations (overlearning). His unwarranted behavior produces painful stimuli upon those who are adjacent to such a hypersensitized individual. Such reactions can vary from disgust to an escape to avoid further noxious stimuli from such a devilish person. Hence, this is a physiologic explanation for those well known reactions which

ensue when the "good guy" is pitted against the "bad guy."

"Why should the Devil have all the good tunes?"

—Rowland Hill

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The Department of Otolaryngology of the Abraham Lincoln School of Medicine and the University of Illinois Hospital Eye and Ear Infirmary, University of Illinois at the Medical Center, will conduct a continuing education course in Laryngology and Bronchoesophagology March 5 to 10, 1973.

The course is limited to fifteen physicians and will be under the direction of Paul H. Holinger, M. D. It will be held largely at the Eye and Ear Infirmary, 1855 West Taylor Street, Chicago, and will include visits to a number of other Chicago hospitals.

Instruction will be provided by means of animal demonstrations and practice in bronchoscopy and esophagoscopy, diagnostic and surgical clinics, as well as didactic lectures.

Interested physicians will please write directly to the Department of Otolaryngology, Eye and Ear Infirmary, 1855 West Taylor Street, Chicago, Illinois 60612.

Political office is the last refuge of the incompetent.

—Boise Penrose.

Every great advance in science has issued from a new audacity of imagination.

—John Dewey.

Woman would be more charming if one could fall into her arms without falling into her hands.

—Ambrose Bierce

In a real dark night of the soul it is always 3 o'clock in the morning.

—F. Scott Fitzgerald.

All the things I really like to do are either immoral, illegal or fattening.

—Alexander Woollcott.

Page 1

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I certify that the statements made by me above are correct and complete.

PS Form 3526 July 1971

WHEREVER IT HURTS

HERE

Fractures



Wherever it hurts, Empirin Compound with Codeine usually provides the relief needed.

HERE


Bursitis



In general, only pain so severe that it requires morphine is beyond the scope of Empirin Compound with Codeine.

Prescribing convenience: up to 5 refills in 6 months, at your discretion (unless restricted by state law); by telephone order in many states.

Empirin Compound with Codeine **No. 3**, codeine phosphate* 32.4 mg. (gr. 1/2); **No. 4**, codeine phosphate* 64.8 mg. (gr. 1). *Warning—may be habit-forming. Each tablet also contains: aspirin 3 1/2, phenacetin gr. 2 1/2, caffeine gr. 1/2.

 **Burroughs Wellcome Co.**
Research Triangle Park
North Carolina 27709



EMPIRIN[®] COMPOUND c CODEINE

#3, codeine phosphate* (32.4 mg.) gr. 1/2
#4, codeine phosphate* (64.8 mg.) gr. 1



Break the ulcer circuit to hyperacidity, hypermotility and ulcer pain.

Pro-Banthine® propantheline bromide Relief Factor in Peptic Ulcer



worry, frustration, job pressure—all set up excessive vagal currents in patients with peptic ulcer.

Pro-Banthine "insulates" the stomach, the duodenum and the lower intestinal tract—the sites where these destructive currents take their toll.

This "insulation" helps block excessive enteric activity and acidity, thus helping to provide the proper environment for the healing of peptic ulcers.

It's nice to know that Pro-Banthine provides this protection at a dosage that causes little or no discomfort and that, unlike antacid agents, Pro-Banthine does not cloud the patient's awareness or thought processes.

By moderating excessive vagal currents Pro-Banthine relieves spasm, acid burn and pain. By reducing gastric motility Pro-Banthine also prolongs the activity of antacids.

Indications: Pro-Banthine is effective as adjunctive therapy in the treatment of peptic ulcer. Dosage must be adjusted to the individual.

Contraindications: Glaucoma, obstructive disease of the gastrointestinal tract, obstructive uropathy, intestinal atony, toxic megacolon, hiatal hernia associated with reflux esophagitis or unstable cardiovascular adjustment in acute hemorrhage.

Warnings: Patients with severe cardiac disease should be given this medication with caution. Fever and possibly heat stroke may occur due to anhidrosis.

In theory a curare-like action may occur, with possible loss of voluntary muscle control. For such patients prompt and continuing artificial respiration should be applied until the drug effect has been exhausted.

Diarrhea in an ileostomy patient may indicate obstruction, and this possibility should be considered before administering Pro-Banthine.

Precautions: Since varying degrees of urinary hesitancy may be evidenced by elderly males

with prostatic hypertrophy, such patients should be advised to micturate at the time of taking the medication.

Overdosage should be avoided in patients severely ill with ulcerative colitis.

Adverse Reactions: Varying degrees of drying of salivary secretions may occur as well as mydriasis and blurred vision. In addition the following adverse reactions have been reported: nervousness, drowsiness, dizziness, insomnia, headache, loss of the sense of taste, nausea, vomiting, constipation, impotence and allergic dermatitis.

Dosage and Administration: The recommended daily dosage for adult oral therapy is one 15-mg. tablet with meals and two at bedtime. Subsequent adjustment to the patient's requirements and tolerance must be made.

How Supplied: Pro-Banthine is supplied as tablets of 15 and 7.5 mg., as prolonged-acting tablets of 30 mg. and, for parenteral use, as serum-type vials of 30 mg.

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San Juan, Puerto Rico 00936

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DICTIONARY OF T E R M S

commonly used in the socioeconomics of health care delivery

The American Society of Internal Medicine has compiled a Dictionary of Terms commonly used in the socioeconomics of medicine. The definitions come from many sources especially the AMA, CMA and Health Insurance Benefits Committee of ASIM. We hope that this Dictionary of Terms will help reduce some of the unnecessary complexity, confusion and chaos which arise in discussions, committee meetings, board meetings and publications.

ALLOWABLE CHARGES

Insurance benefits which may or may not be "assigned" by the patient for payment directly to the physician and are limited by pre-set standards. In the instance of Medicare direct payment is predicated upon agreement by the physician to accept the allowable reimbursement for the payment of services rendered, after satisfaction of coinsurance and deductible requirements.

AMBULATORY CARE EVALUATION

Peer review to assure the quality of medical care, services, and procedures provided to ambulatory patients.

A function of the local medical society, or other organization authorized by the medical society, in a geographically defined locality, which incorporates the concepts of utilization review and medical audit.

(AMA Proceedings of the House of Delegates, November 1971)

ASSIGNMENT OF BENEFITS

The insurance benefits may be "assigned" by the patient to the physician upon agreement by the latter to accept the allowable reimbursement as the total payment for services rendered, after satisfaction of co-insurance and deductible requirements.

AVAILABILITY

The extent to which a medical service is obtainable at the time and place and of a standard and amount needed.

(California Medical Association's committee on the Role of Medicine in Society.)

BENEFICIARY (also eligible individual, enrollee, member, participant)

Any person eligible as either a subscriber or a dependent for service in accordance with a contract.

(Egert, Eli S., *A Glossary of Terms Commonly Used in Talking About Group Health Plans*)

BROAD BAND LIMIT

The coefficient value representing the mean coefficient based on all the "prevailing charges," as defined below, for a broad band category of service—Medicine, Surgery, etc., for a given geographic area.

CAPITATION (also per capita, capitation payment)

The amount of money required per person to provide covered services to a group of eligible persons for a specific time.

(Egert, Eli S., *A Glossary of Terms Commonly Used in Talking About Group Health Plans*)

CAPITATION PAYMENT (See **CAPITATION**)

CARRIER

A carrier administers Part B of Medicare

CERTIFICATION AND RECERTIFICATION OF SERVICE NEED

These terms are used for the requirement that a physician attest to the need for hospitalization and continuing stay, usually on admission and at stated intervals thereafter.

CLAIMS REVIEW

Peer evaluation and adjudication of claims questions referred for peer review by any party with a valid interest in the case. (AMA Proceedings of the House of Delegates, November 1971)

CLINICIAN

A physician who is concerned primarily with the diagnosis and treatment of an individual patient.

COMPETENCE

The physician's overall medical abilities for a given medical problem.

(California Medical Association's committee on the Role of Medicine in Society)

COMPREHENSIVE DIAGNOSTIC EXAMINATION

Includes history and physical examination with sufficient time to insure thoroughness of evaluation. A list of diagnostic procedures including electrocardiogram, complete blood count, urinalysis, chemical profile and chest x-ray should be reasonably considered an integral part of a complete diagnostic evaluation by an Internist, to be modified as deemed best within the judgment of the physician.

(Indiana Society of Internal Medicine, Board of Directors, July 1971)

COMPREHENSIVE MEDICAL CARE (See also **HEALTH CARE** and **MEDICAL CARE**) 'Comprehensive medical care' is a concept which includes not only the traditional ideas of treatment of acute illness and care of the chronically ill but also the prevention and early detection of disease and the rehabilitation of those disabled from illness. Thus, this phrase implies the availability and use of the full scope of medical care services for the benefit of the patient.

Other implications are inherent in the concept:

1. The care is more often *medical* in nature, as opposed to short-term, therapy-oriented surgical care.
2. The care is continuing, taking place over the course of all of the years of a person's life. It involves a long-term relationship between the physician and his patient.
3. The care is often diagnostic; it therefore includes comprehensive examinations and laboratory and x-ray tests.
4. The care is in part devoted to the maintenance of good health; it therefore includes routine examinations, screening tests, immunizations, etc.
5. The care tends to be *patient-oriented*, not disease-oriented.
6. The care often takes place in the *physician's* office; hospitalization is the unusual event.

CURRENT PROCEDURAL TERMINOLOGY

The AMA system designated by this title that provides for describing, coding, and reporting professional services and procedures.

CUSTOMARY CHARGE

Relates to the range of usual charges made by physicians of similar ability and experience for the same service with the same specific socio-economic and limited geographic area.

(AMA *Digest of Official Actions*, June 1966)

A fee is customary when it is within the range of usual charges for a given service billed by most physicians or providers of services with similar training and experience within a given area.

(*The Benefit Manual* for the administration of Comprehensive Contracts, National Association of Blue Shield Plans)

The median of all of a physician's charges during the data base period for a given procedure, weighted by number of services.

CUSTOMARY CHARGE COEFFICIENT

The mean coefficient value based upon a given physician's median charges for all his procedures in a given broad band type of service—Medicine, Surgery, etc., weighted by number of services.

DELIVERY OF MEDICAL CARE, THE
(See NEW SCIENCE)

DIRECT BILLING

The method of presenting a statement of charges for services and procedures whereby the provider submits an itemized bill directly to the patient.

EFFICIENCY

The process of rendering services with minimum expenditure or waste of talent, time, money and materials.

(California Medical Association's Committee on the Role of Medicine in Society)

ELIGIBLE INDIVIDUAL (See
BENEFICIARY)

ENROLLEE (See BENEFICIARY)

FISCAL AGENT

A fiscal agent administers Medicaid for the state.

GOOD HEALTH

A state of total physical, mental and social well-being, and not merely the absence of disease.

(World Health Organization)

HEALTH CARE

That portion of care which encompasses the social, economic and environmental influences as well as medical care.

Note: That "Medical Care" connotes only that portion of care under the physician's direction.

INSTITUTIONAL CARE EVALUATION

Peer review to assure the quality of medical care provided within a health care institution.

A function of the medical staff incorporating the concepts of utilization review and medical audit.

(AMA Proceedings of the House of Delegates, November 1971)

INTERMEDIARY

An intermediary administers Part A of Medicare.

MEAN CHARGE

The arithmetic average obtained by dividing the sum of several charges by the number of charges.

MEDIAN CHARGE

Halfway point of a group of charges which leaves an equal number of charges above and below the figure chosen.

MEDICAL AUDIT

A retrospective examination of the clinical application of medical knowledge, advancing the level of medical care in an institution or in a community through an educational process.

(AMA Proceedings of the House of Delegates, November 1971)

MEDICAL CARE

That portion of care under the direction of the physician.

Note: "Health Care" which includes in addition social, economic and environmental influences beyond the control of medicine.

MEDICAL CARE EVALUATION

The educational function of the medical staff designed to assure the quality of care in the hospital or other health care institution. Medical care evaluation is concerned with three dimensions of quality—utilization review, medical audit, and medical practice analysis.

(AMA Proceedings of the House of Delegates, November 1971)

MEDICAL PRACTICE ANALYSIS

A function of the medical society, or other organization authorized by the medical society, designed to coordinate all peer review efforts of a community. Medical practice analysis focuses on the development and application of criteria for optimal medical care, and evaluates the individual and collective quality, volume and cost of medical care, wherever provided.

(AMA Proceedings of the House of Delegates, November 1971)

MEMBER (See BENEFICIARY)

MOTIVATION

The drive or incentive to receive, render, or otherwise provide health care service of high quality.

(California Medical Association's Committee on the Role of Medicine in Society)

NEW SCIENCE, THE (See DELIVERY OF MEDICAL CARE)

The application of the physician's scientific knowledge to patient care.

PARTICIPANT (See BENEFICIARY)

PEER REVIEW

Evaluation by practicing physicians of the quality and efficiency of services ordered or

performed by other practicing physicians. *Peer review is the all-inclusive term for medical review effort* Medical practice analysis; inpatient hospital and extended care facility utilization review; medical audit; ambulatory care review; and claims review are all aspects of peer review.

(AMA Proceedings of the House of Delegates, November 1971)

PER CAPITA (See CAPITATION)

PERCENTILE (IN PAYMENT FORMULAS)

As used in Medicare and Medicaid, the percentile indicates where, in a series of charges for a service, ranged from low to high, the ceiling on payment is placed. It does *not* represent a percentage of the individual physician's fee, and bears no necessary relation to the total billing.

(AMA Division of Health Service, July 1970)

PREVAILING CHARGE (UNDER MEDICARE)

The seventy-fifth percentile of the customary charges, as defined above, for a given procedure for all physicians in the given geographic area. The number of services is taken into account in deriving this measure.

PREVENTIVE MEDICINE

That branch of medicine which has primary interest in preventing physical, mental and emotional disease and injury in contrast to treating the sick and injured. Secondly, it is concerned with slowing the progress of disease and conserving maximal function.

(American College of Preventive Medicine, Board of Regents, August 1971)

PROCEDURAL TERMINOLOGY FOR INTERNISTS (PTI) (See CURRENT PROCEDURAL TERMINOLOGY)

PROFESSIONAL-TECHNICAL SPLIT

Charges that are subdivided into a physician interpretation charge and a production charge.

QUALITY MEDICAL CARE

A scientific approach to the establishment of a correct diagnosis, and institution of appropriate therapy and management designed to satisfy the overall needs of the patient. It should be readily available, efficiently rendered, and properly documented.

(American Society of Internal Medicine, Board of Trustees, January 1970)

REASONABLE CHARGE

A fee is "reasonable" when it meets the "usual and customary" criteria or, in the opinion of a duly constituted medical society review committee, is justified under what is considered a complexity of treatment which merits special consideration.

(AMA *Digest of Official Actions*, June 1966)

A charge is reasonable when it meets the usual and customary criteria, or it may be reasonable if in the opinion of an appropriate medical review committee it merits special consideration based on complexity of treatment of the particular case.

(*The Benefit Manual* for the administration of Comprehensive Contracts, National Association of Blue Shield Plans)

RECERTIFICATION OF SERVICE NEED (see CERTIFICATION AND RECERTIFICATION OF SERVICE NEED)

RELATIVE VALUE STUDY

A statement of the relationship of the various services in four major areas (medicine, surgery, radiology and pathology) expressed in units. The relationship of one service to another within each discipline of medicine is expressed in units. (For example, the value assigned in initial history and physical may be four to six times that of a routine office call. The RVS also recognizes that fees for medical, surgical, radiological and pathological services may bear no relationship to one another. The Relative Value Study can be

converted into a fee schedule by the use of a dollar conversion factor.)

SATISFACTION

The fulfillment of reasonable expectations of those receiving, rendering, or otherwise providing medical care.

(California Medical Association's Committee on the Role of Medicine in Society)

THIRD PARTIES

Any organization retained by or acting for the patient for the payment of fees for medical services.

USUAL CHARGE

Relates to the individual physician and the charge which he most commonly establishes as fair recompense for specific services.

(AMA *Digest of Official Actions*, June 1966)

The usual charge is the most consistent charge by an individual physician or provider of service to patients for a given service.

(*The Benefit Manual* for the administration of Comprehensive Contracts, National Association of Blue Shield Plans)

UTILIZATION REVIEW

The evaluation of the efficient use of professional medical care services, procedures, and facilities.

As a function of the institutional medical staff, utilization review would include analysis of the appropriateness of: admissions, services ordered and provided, length of stay and discharge practices, and documentation, both on a current and retrospective basis. As a function of the local medical society, or other organization authorized by the medical society, utilization review would focus on the appropriateness of diagnostic procedures, therapy and documentation.

(AMA Proceedings of the House of Delegates, November 1971)

An Afterthought On Birth Control

Researchers at the University of Texas Medical School in San Antonio have reported studies which may lead to the development of a "morning after" birth control pill for forgetful humans, according to the National Society for Medical Research.

Dr. Carl J. Pauerstein, associate professor of obstetrics and gynecology, and three other UTMS staffers indicate they feel a pill can be developed which will prevent implantation of the fertilized egg in the uterus. This would prevent subsequent development of the egg into a viable fetus.

Dr. Pauerstein pointed out that "timing is critical to successful implantation. If the egg gets there too soon, then implantation does not take place."

The scientists found that injections of a compound including progesterone—a female

hormone—in female rabbits caused a rabbit's egg to speed through the uterus in less than 24 hours.

"Hastening passage of the egg from the usual five to seven days," Dr. Pauerstein says, "would prevent implantation and thus should make an effective contraceptive."

The researcher says such a contraceptive could be developed into a pill to be taken after-the-fact.

The other UTMS faculty members authoring the report are: Drs. Joseph E. Martin, Ben Fremming, and Barrie J. Hodgson. A \$1,000 award was presented Sept. 22 to the four researchers after their paper was selected as this year's outstanding research contribution by the Central Association of Obstetricians and Gynecologists.

Pesticides: A Possible Link To Impotency

A West Virginia University research team has demonstrated what they feel is a possible link between pesticide residuals in animals and hormonal imbalance which may lead to impotency, according to the National Society for Medical Research.

Dr. John A. Thomas, professor of pharmacology in the WVU School of Medicine, reported that pesticides such as malathion, parathion and carbaryl are administered to various species and traced by the use of radioactive particles. High amounts of the pesticides were found in various male organs of reproduction. DDT, for instance, suppressed some metabolic functions of the prostate gland. Large amounts of DDT were also found in the testes and seminal plasma.

Although these pesticide residuals are found in the male reproductive system, there has not yet been any conclusive proof that genetic damage or irreversible sterility may be caused by such compounds.

Pesticide residues have been blamed for causing impotence among some farm workers in England, and suspected of contributing to the increased incidence of fetal abnormalities in laboratory animals. Dr. Thomas feels that such abnormalities in animals may be caused by altered hormonal levels in the female, altered seminal fluid or sperm in the male or a combination of these factors.

Insecticides have also been blamed for the hormonal imbalance in female birds which seems to result in thin egg shells. The weakened shells cannot withstand incubation, and this weakness is believed by many experts to be partly responsible for the near extinction of many species, including the bald eagle.

The West Virginia researchers feel the link is there, but they have much work to do before they can conclusively prove that link does exist.

Another Link Between Viruses And Cancer

A Columbia University researcher has reported that nearly all leukemia patients tested in a study show traces of an enzyme similar to one present in a virus that causes cancer in mice, according to the National Society For Medical Research.

Such a finding strengthens the theory that viruses may cause some cancer in humans, and it may hasten development of an early diagnostic test for leukemia and other forms of cancer.

Dr. Sol Spiegelman, director of Columbia's Institute of Cancer Research, made his report at the Seventh National Cancer Conference in Los Angeles during the latter part of September.

The enzyme, called reverse transcriptase, has been found in patients with Hodgkin's disease, sarcomas and breast cancer, according to an earlier report made by Dr. Spiegelman.

The Columbia scientist said that the enzyme, and other properties characteristic of the cancer virus, were found in 95 per cent of his leukemia patients regardless of the type of leukemia involved.

Over 2,000 physicians attended the meeting, which was sponsored by the National

Cancer Institute (NCI) and the American Cancer Society.

Dr. Seymour Perry, associate scientific director for NCI's chemotherapy program, told participants at a news conference that Dr. Spiegelman's work provides a new lead for finding ways to destroy tumor cells selectively.

Dr. Perry also pointed out that the enzyme might be useful as an indicator that a particular patient known to have had cancer and was treated may still have some tumor cells in his body. Early diagnosis would make it possible to catch the disease before it can spread to various sites within the body.

Before such sophisticated diagnostic techniques can be developed, or before the link between viruses and cancer can be definitely proven, many studies involving humans and animals must be undertaken. There will be no immediate cure for this dreaded and complicated affliction, but with continuing support from the American public scientists like Dr. Spiegelman will eventually find the answers that may eventually lead to the elimination of cancer.

EMBRYO BANKS MAY BE FEASIBLE

(Continued from Page 333)

laboratory animals for long periods of time in the frozen embryonic state. When such animals are needed they can be thawed and their development within a foster mother allowed to continue.

With the uproar that normally follows such a study, it is easy to understand why the Cambridge scientist is reluctant to relate his work to possible human application. The term "test tube baby" is not applicable to the work done in this area of mammal reproduction studies, but this does not pre-

vent the anti-science response following its use by the press.

Dr. Whittingham's work will probably be very useful in advancing animal breeding practices. Sperm from prize bulls is now used in artificial insemination, but this new procedure may prove more highly successful in breeding superior animals. Eggs and sperm could be taken from prize animals and combined in a test tube where scientists can watch the initial development. These genetically superior embryos would then be shipped all over the world, implanted in foster mothers and allowed to develop into high grade animals.

DBI® phenformin HCl
Tablets of 25 mg.
DBI-TD® phenformin HCl
Timed-Disintegration
Capsules of 50 and 100 mg.

Indications: Stable adult diabetes mellitus; sulfonylurea failures, primary and secondary; adjunct to insulin therapy of unstable diabetes mellitus.

Contraindications: Diabetes mellitus that can be regulated by diet alone; juvenile diabetes mellitus that is uncomplicated and well regulated on insulin; acute complications of diabetes mellitus (metabolic acidosis, coma, infection, gangrene); during or immediately after surgery where insulin is indispensable; severe hepatic disease; renal disease with uremia; cardiovascular collapse (shock); after disease states associated with

hypoxemia.

Warnings: Use during pregnancy is to be avoided.

Precautions: 1. *Starvation Ketosis:* This must be differentiated from "insulin lack" ketosis and is characterized by ketonuria which, in spite of relatively normal blood and urine sugar, may result from excessive phenformin therapy, excessive insulin reduction, or insufficient carbohydrate intake. Adjust insulin dosage, lower phenformin dosage, or supply carbohydrates to alleviate this state. **Do not give insulin without first checking blood and urine sugar.**

2. *Lactic Acidosis:* This drug is not recommended.

Why go to the islets

Let's say you've decided that diet alone won't work in your adult-onset, nonketotic diabetic.

You're considering oral therapy for a new patient. DBI-TD or a sulfonylurea. Which?

Both lower blood sugar. But here's why DBI-TD which is not a sulfonylurea, may be important to the dieting diabetic.

- Sulfonylureas promote release of insulin.
- Insulin is lipogenic and helps transport glucose into adipose tissue.
- Overweight patients frequently have normal or high levels of endogenous insulin.
- DBI-TD lowers blood sugar without stimulating insulin secretion from the pancreas.

Usual dosage: one 50-mg. capsule with breakfast may be effective, or second capsule may be given with the evening meal.

DBI-TD® Geigy
phenformin HCl

**lowers blood sugar
without raising blood insulin**

presence of azotemia or in any clinical situation that predisposes to sustained hypotension could lead to lactic acidosis. To differentiate lactic acidosis from ketoacidosis, determinations of ketones in the blood should be made in diabetics previously treated on phenformin, or phenformin and insulin who have become unstable. If electrolyte imbalance is suspected, periodic determinations should also be made of electrolytes, pH, and the pyruvate ratio. The drug should be withdrawn and insulin, when required, and other corrective measures instituted immediately upon

the appearance of any metabolic acidosis.

3. **Hypoglycemia:** Although hypoglycemic reactions are rare when phenformin is used alone, every precaution should be observed during the dosage adjustment period particularly when insulin or a sulfonylurea has been given in combination with phenformin.

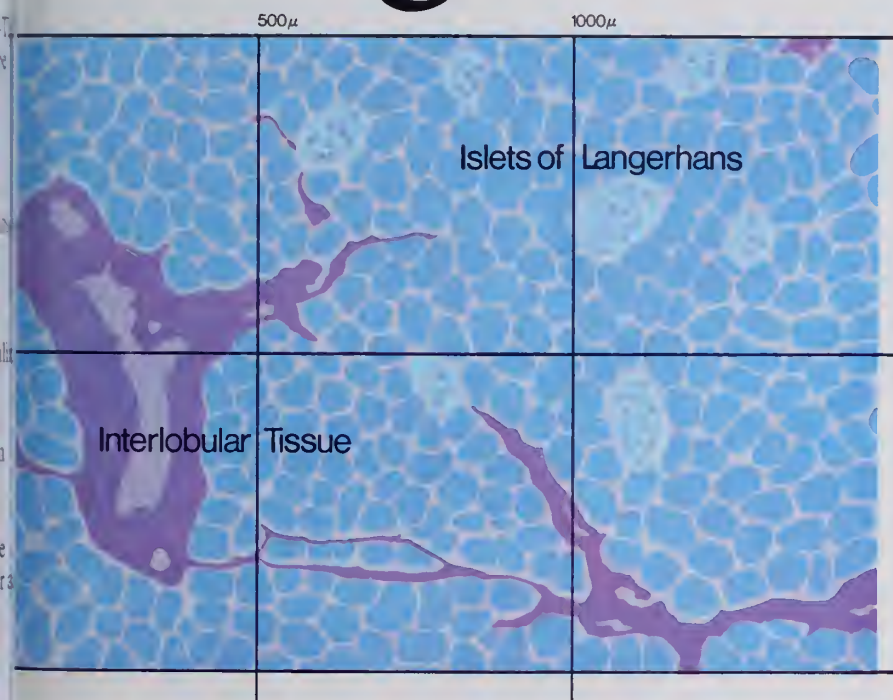
Adverse Reactions: Principally gastrointestinal; unpleasant metallic taste, continuing to anorexia, nausea and, less frequently, vomiting and diarrhea. Reduce dosage at first sign of these symptoms. In case of vomiting, the drug should be immediately withdrawn. Although rare, urticaria

has been reported, as have gastrointestinal symptoms such as anorexia, nausea and vomiting following excessive alcohol intake.
(B) 98-146-103-D (6/72)

For complete details, including dosage, please see full prescribing information.

GEIGY Pharmaceuticals
Division of CIBA-GEIGY Corporation
Ardsley, New York 10502

of Langerhans?



Before using DBI-TD or any oral hypoglycemic, please read the prescribing information concerning dosage, warnings, contraindications, precautions and adverse reactions.



Ampicillin, Carbenicillin, Oxacillin...

IMAGINE YOUR PRACTICE WITHOUT THEM

In 1957 Beecham scientists discovered and isolated 6-APA, the penicillin nucleus that opened the way to a new generation of semi-synthetic penicillins. Over the past 14 years more than 3000 different semi-synthetic penicillins have been synthesized and evaluated by our staff. The fruits of their work are in your hands today. Others will be in your hands tomorrow.

Need we say more?

Prescribe the discoverer's brands:

Totacillin[®](ampicillin trihydrate)

Pyopen[®](disodium carbenicillin)

Bactocill[®](sodium oxacillin)

and more to come

**Beecham-Massengill
Pharmaceuticals **BMP****

Div. of Beecham Inc. Bristol, Tennessee 37620

- ☐ Totacillin (ampicillin trihydrate) capsules equivalent to 250 mg. and 500 mg. ampicillin, for oral suspension equivalent to 125 mg./5 cc. and 250 mg./5 cc. ampicillin.
- ☐ Pyopen (disodium carbenicillin) vials for injection equivalent to 1 gm. and 5 gm. of carbenicillin.
- ☐ Bactocill (sodium oxacillin) capsules equivalent to 250 mg. and 500 mg. oxacillin and vials for injection equivalent to 500 mg. and 1 gm. oxacillin.

PLACEMENT SERVICE

(Continued from Page 335)

Wanted: General Practitioner or Internist to join active 4-M. D. professional association—3-GP's, 1 Board Surgeon. Modern offices, accredited 75 bed hospital. Beautiful town of 10,000 with excellent churches, schools (public and private). Salary for 3-6 months then arrangement for full partnership. PW-22

General Practitioners—

For town of 2,000 population located in trade area of 15,000 population in northeast Alabama. Nearest metropolitan centers 30 miles distance. Industrial area. Clinic and some office equipment available. Several churches, schools, and civic clubs. PW-23

Opportunity for GP to join well established four-man partnership; three general practitioners and one board certified surgeon. Practice located in city of 8,000 population, trade area of 60,000, north-central Alabama. Modern new partnership-owned offices adjacent to modern 125-bed fully accredited hospital. Salaried first year with possible partnership status at end of first year. PW-27

Wanted, General Practitioner, Orthopedic Surgeon, General Surgeon to replace recently deceased associate, large Industrial Clinic in Birmingham. Modern Office space. Salary negotiable. PW-28

For community of 1,500 population located in south Alabama near city of 12,000 population. Hospitals located within 25 miles. Office space and equipment available. Farming, cattle and textile industries in the area. Several churches and school. Civic clubs and golf courses. PW-1-1

Opportunity for two general practioners to assist two established GP's in a progressive comprehensive medical program in rural county of 12,500 population. Modern new office building, fully equipped, located in county seat, 20 miles

west of Montgomery, Alabama. Excellent salary. Several churches, school, and recreation areas. PW-1/8

Opportunity in town of 3,000 population located in trade area of 12,000 population in south Alabama. 23-bed hospital. Office space available. Numerous churches and schools. Recreational areas nearby. PW-1/11

Opportunity for associate in general practice or take over general practice in town of 1,200 population in south central Alabama with trade area of 5,000 population. Well established practice and well equipped office. Located near recreational area. PW-1/12

Opportunity in town of 3,000 population in trade area of 15,000 located in West Alabama. Clinic building available with equipment. Farming and several small industries. Several schools and churches. PW-1/13

Opportunity in south Alabama in town of 2,700 population, trade area of 15,000 population. Nearest large city of 30,000 population located 45 miles. Nearest hospital is 10 miles. One physician now engaged in practice in the town. Necessary arrangements will be made for office space, equipment, and housing. Industrial and agricultural area. Churches, schools, civic and social activities. PW-30

Partner wanted in general practice. Recent death of previous associate. Large family practice located in a suburb of Mobile. Excellent hospitals. PW-31

Opportunity in southeast Alabama in town of 3,000 population, trade area of 15,000 population. Nearest large city, 8 miles, 40,000 population, and 2 large hospitals. Office space and housing readily available. Industrial and agricultural area. Churches, schools, civic and social activities. PW-35

Experience has already shown that the impeachment the Constitution has provided is not even a scarecrow.

—Thomas Jefferson, 1819.

Imperialism, in a sense, is the transition stage from capitalism to Socialism . . . It is capitalism dying, not dead.

—Nikolai Lenin, 1917.

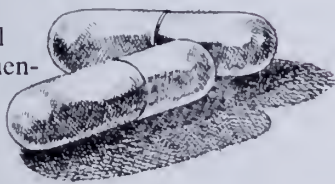
**Because you
practice
medicine in the
Cotton State...**



You carry one of the heaviest patient loads in the country. Since this may include a number of patients with gastritis and duodenitis... you should know more about Librax®

Helps reduce anxiety-related G.I. symptoms

A patient may blame his attacks of gastritis or duodenitis on "something he ate" but contributing factors may be his job, marital problems, financial worries or some other unmentioned source of stress and excessive anxiety that exacerbated the condition. Whether it is "something he ate" or "something eating him," adjunctive Librax can help. Librax offers both the antianxiety action of Librium® (chlordiazepoxide HCl), that can help relieve excessive anxiety, and the dependable anticholinergic action of Quarzan® (clidinium Br), that can help reduce gastrointestinal hypermotility and hypersecretion.



Patient-oriented dosage — up to 8 capsules daily in divided doses

For optimal response, dosage can be adjusted to suit patient needs—1 or 2 capsules, 3 or 4 times a day.

To help relieve anxiety-linked symptoms in gastritis and duodenitis adjunctive Librax®

ROCHE

Each capsule contains 5 mg chlordiazepoxide HCl and 2.5 mg clidinium Br.

Before prescribing, please consult complete product information, summary of which follows:

Contraindications: Patients with glaucoma; prostatic hyperrophy and benign bladder neck obstruction; known hypersensitivity to chlordiazepoxide hydrochloride and/or clidinium bromide.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering Librium (chlordiazepoxide hydrochloride) to known addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards. As with all anticholinergic drugs, an inhibiting effect on lactation may occur.

Precautions: In elderly and debilitated, limit dosage to smallest effective amount to preclude development of ataxia, oversedation or confusion (not more than two capsules per day initially; increase gradually as needed and tolerated). Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients. Employ usual precautions

in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: No side effects or manifestations not seen with either compound alone have been reported with Librax. When chlordiazepoxide hydrochloride is used alone, drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally with chlordiazepoxide hydrochloride, making periodic blood counts and liver function tests advisable during protracted therapy. Adverse effects reported with Librax are typical of anticholinergic agents, i.e., dryness of mouth, blurring of vision, urinary hesitancy and constipation. Constipation has occurred most often when Librax therapy is combined with other spasmolytics and/or low residue diets.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Pinworm therapy is often a family affair



Contraindications: History of hypersensitivity to thiabendazole.

Warnings: If hypersensitivity reactions occur, drug should be discontinued immediately and not resumed. Rarely, erythema multiforme has been associated with thiabendazole therapy; in severe cases (Stevens-Johnson syndrome), fatalities have occurred. Because CNS side effects may occur quite frequently, activities requiring mental alertness should be avoided. Safe use in pregnancy or lactation has not been established.

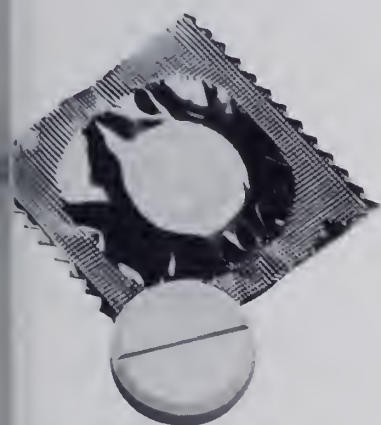
Precautions: Ideally, supportive therapy is indicated for anemic, dehydrated, or malnourished patients prior to initiation of anthelmintic therapy. In presence of hepatic or renal dysfunction,

patients should be carefully monitored.

Adverse Reactions: Most frequently encountered are anorexia, nausea, vomiting, and dizziness. Less frequently, diarrhea, epigastric distress, pruritus, weariness, drowsiness, giddiness and headache have occurred. Rarely, tinnitus, hyperirritability, numbness, abnormal sensation in eyes, blurring of vision, xanthopsia; hypotension, collapse; enuresis; transient rise in cephalin flocculation and SGOT; perianal rash, cholestasis and parenchymal liver damage; hyperglycemia; transient leukopeni malodor of the urine, crystalluria, hematuria; appearance of liv Ascaris in the mouth and nose. Hypersensitivity reactions

A New Dosage Form:

Chewable Tablets 500 mg Mintezol® THIABENDAZOLE | MSD)



so easy to take
everyone in the family
can keep to the
regimen you prescribe

clude: fever, facial flush, chills, conjunctival injection,
gioedema, anaphylaxis, skin rashes, erythema multiforme
cluding Stevens-Johnson syndrome), and lymphadenopathy.
plied: Chewable tablets, containing 500 mg thiabendazole,
boxes of 36, strip packaged, individually foil wrapped;
sension, containing 500 mg thiabendazole per 5 cc, in
tles of 120 cc.

For more detailed information, consult your MSD representa-
or see full prescribing information. Merck Sharp &
hme, Division of Merck & Co., Inc., West Point, Pa. 19486

MSD
MERCK
SHARP
DOHME
addendum

INDICATION | DOSAGE SCHEDULE

MINTEZOL® (Thiabendazole, MSD) has demonstrated effectiveness against a broad spectrum of nematode infections. Dosages are weight related. For your convenience, the information in the weight-dose chart below is included in the full prescribing information and in the 1973 edition of PDR.

The recommended maximum daily dose of MINTEZOL is 3 g (6 tablets).

MINTEZOL should be given after meals if possible. Dietary restriction, complementary medications, and cleansing enemas are not needed.

The usual dosage schedule for all conditions is two doses per day. The size of the dose is determined by the patient's weight.

Weight-dose chart:

WEIGHT (lb)	EACH DOSE (g)	TABLETS
25	0.25	½
50	0.5	1
75	0.75	1½
100	1.0	2
125	1.25	2½
150 & over	1.5	3

The regimen for each indication follows:

INDICATION	REGIMEN	COMMENTS
Pinworm disease	Two doses per day for 1 day. Repeat in 7 days. This regimen is designed to reduce the risk of reinfection.	If this is not practical, give 2 doses per day for 2 successive days.
Threadworm,* large roundworm,* hookworm,* and whipworm* disease	Two doses per day for 2 successive days.	A single dose of 20 mg/lb or 50 mg/kg may be employed as an alternative schedule, but a higher incidence of side effects should be expected.
Creeping eruption	Two doses per day for 2 successive days.	If active lesions are still present 2 days after completion of therapy, a second course is recommended.
Symptoms of trichinosis* during the invasive phase of the disease	Two doses per day for 2 to 4 successive days according to the response of the patient.	The optimal dosage for the treatment of trichinosis has not been established.

*Clinical experience with thiabendazole for treatment of each of these conditions in children weighing less than 30 lb has been limited.

When irritable colon feels like this



... **KINESED®** provides more complete relief.

Gastroenteritis, colitis, gastritis or duodenitis can produce spasm or hypermotility, gas distention and discomfort. But Kinesed can provide a balanced formulation to relieve these symptoms:

- ☐ belladonna alkaloids—for the hyperactive bowel
- ☐ simethicone—for accompanying distention and pain due to gas
- ☐ phenobarbital—for associated anxiety and tension

Contraindications: Hypersensitivity to barbiturates or belladonna alkaloids, glaucoma, advanced renal or hepatic disease.

Precautions: Administer with caution to patients with incipient glaucoma, bladder neck obstruction or urinary bladder atony. Prolonged use of barbiturates may be habit-forming.

Side effects: Blurred vision, dry mouth, dysuria, and other

atropine-like side effects may occur at high doses, but are only rarely noted at recommended dosages.

Dosage: *Adults:* One or two tablets three or four times daily. Dosage can be adjusted depending on diagnosis and severity of symptoms.

Children 2 to 12 years: One-half or one tablet three or four times daily. Tablets may be chewed or swallowed with liquids.



STUART PHARMACEUTICALS | Division of ICI America Inc. | Wilmington, Del. 19899

(from the Greek *kinetikos*,
to move,
and the Latin *sedatus*,
to calm)

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antispasmodic/sedative/antiflatulent

Each *chewable tablet* contains: 16 mg. phenobarbital (warning: may be habit-forming); 0.1 mg. hyoscyamine sulfate; 0.02 mg. atropine sulfate; 0.007 mg. scopolamine hydrobromide; 40 mg. simethicone.

Chuckwalla (*Sauromalus obesus*):
This southwestern desert lizard seeks
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When attempts are made to probe him
from his niche, he gulps air
until his abdomen is distended up to
sixty per cent over its normal size...
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around the state

Vital Statistics

NEW MEMBERS

Dallas County

Cole, David Owen, Sr., b 33, mc U. Mississippi 59, recip. Miss. 72, 223 Cresthaven Court, Selma, Alabama 36701. Path.

Etowah County

Gibbs, Wayne Chadwick, b 39, mc U. Ala. 65, sb 66, Medical Arts Bldg., 303 Bay St., Gadsden, Alabama 35901. U.

Lauderdale County

Roy, Vance Cyril, Jr., b 39, mc Tenn. 63, recip. Tenn. 71, 220 W. Tennessee St., Florence, Alabama 35630. NS.

Madison County

Booher, Peter Choate, b 40, mc Emory 66, recip. Georgia 69, 905 Madison St., Huntsville, Alabama 35801. R.

Pritchett, Joseph Henry, Jr., b 25 mc Georgia 48, recip. Ga. 72, 930 Franklin St., Huntsville, Alabama 35801. GP.

Morgan County

Haney, William Keith, b 24, mc Indiana 53, recip. Indiana 72, Pineview Hospital, Box 31, Hartselle, Alabama 35640. P.

Levin, Benton Bains, b 43, mc Duke 69, recip. N. C. 72, Medical Park Specialties Center, 13th Ave., Medical Dr., S.E., Decatur, Alabama 35601. Pd.

MEMBERS DECEASED

Jefferson County

O'Dell, James Walter, Birmingham, Alabama, Deceased 9/19/72.

Marion County

Brooks, James Otis, Hamilton, Alabama, Deceased 7/5/72.

Mobile County

Pennington, Julius Austin, Saraland, Alabama, Deceased 5/4/72.

Montgomery County

Nodine, Edwin Rodgers, Montgomery, Alabama, Deceased 9/2/72.

CHANGES OF ADDRESS

Calhoun County

Simmons, Robert C., Jr., present Anniston to 429 E. 9th St., Anniston, Alabama 36201.

Jefferson County

Baugh, Aubrey T., Jr., present Birmingham to Suite 200, 3349 Montgomery Highway, Birmingham, Alabama 35209.

Holcomb, Maurice C., Jr., present Birmingham to 1515 - 6th Ave., South, Birmingham, Alabama 35233.

Johnson, Ingeborg M., present Birmingham to 3105 Carlisle Rd., Birmingham, Alabama 35213.

Leitner, W. A., present Macon, Georgia to 2701 10th Ave., South, Birmingham, Alabama 35205.

AROUND THE STATE

Robertson, Brison O., Sr., present Birmingham to 828 Conroy Rd., Birmingham, Alabama 35222.

Swan, John L., present Birmingham to 4179 North Carmel Dr., Mobile, Alabama 36608.

Lamar County

Box, William C., present Birmingham to Carraway Methodist Hospital, Birmingham, Alabama 35234.

Lauderdale County

Norvell, Strudwick, present Florence to 2001 Florence Blvd., Florence, Alabama 35630.

Madison County

Clanton, Jerry N., present Huntsville to Suburban Hospital, 4001 Dutchmans Lane, Louisville, Kentucky 40207.

Mobile County

Dismukes, Henry M., present Mobile to 103 Dauphin St., Mobile, Alabama 36602.

Miller, Joseph B., present Mobile to Suite 110, Three Office Park, Mobile, Alabama 36609.

Newton, Philip T., Jr., present Mobile to 313 Stonewall Jackson Dr., Wilmington, N. C. 28401.

Montgomery County

Garrick, Jean, present Baltimore, Maryland to 1935 S. Court St., Montgomery, Alabama 36104.

Morgan County

Conover, John R., present Decatur to P. O. Box 2211, 407 - 4th Ave., S. E., Decatur, Alabama 35601.

Russell County

Kraatz, Robert W., present Phenix City, Alabama to Carriage Hill Townhouse, Apt. V-4, Phenix City, Alabama 36867.

Tuscaloosa County

Arnold, Herbert L., Jr., present Tuscaloosa to Suite 108, 921 - 3rd Ave., E., Tuscaloosa, Alabama 35401.

Findley, Herbert L., Jr., present Tuscaloosa to Suite 108, 921 - 3rd Ave., E., Tuscaloosa, Alabama 35401.

Hensle, Terry W., present Colorado Springs, Colorado to 21 Moore Road, Wayland, Massachusetts 01778.

Nelson, Robert, Jr., present Tuscaloosa to Suite 108, 921 - 3rd Ave., E., Tuscaloosa, Alabama 35401.

Simpson, William F., present Tuscaloosa to 921 - 3rd Ave., E., Suite 109, Tuscaloosa, Alabama 35401.

NEW TELEPHONE NUMBERS

Booher, P. C., Madison	533-4300
Cole, D. O., Sr., Dallas	872-4579
Colvin, G. W., Talladega	763-7352
Dunn, J. G., Jr., Covington	493-3950
Gibbs, W. C., Etowah	547-1605
Haney, W. K., Morgan	355-9338
Johnson, I. M., Jefferson	933-8101
Levie, B. B., Morgan	355-9222
Pritchett, J. H., Madison	539-0769
Roy, V. C., Jr., Lauderdale	764-7721
Singleton, C. E., Hale	624-3044
White, D. A., Jr., Jefferson	870-1400

People who can't keep from criticizing the younger generation usually can't remember who raised it.

There is nothing so stupid as an educated man, if you get him off the thing he was educated in.

—Will Rogers.

An expert is one who knows more and more about less and less.

—Nicholas Murray Butler.

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The ability to make love frivolously is the chief characteristic which distinguishes human beings from the beasts.

—Heywood C. Broun.

Any government, like any family, can for a year spend a little more than it earns. But you and I know that a continuance of that habit means the poorhouse.

—Franklin D. Roosevelt in 1932.

The world belongs to the enthusiast who keeps cool.

—William McFee.

Time is a great legalizer, even in the field of morals.

—Henry L. Mencken.

Rondomycin[®]

(methacycline HCl)

CONTRAINDICATIONS: Hypersensitivity to any of the tetracyclines.

WARNINGS: Tetracycline usage during tooth development (last half of pregnancy to eight years) may cause permanent tooth discoloration (yellow-gray-brown), which is more common during long-term use but has occurred after repeated short-term courses. Enamel hypoplasia has also been reported. **Tetracyclines should not be used in this age group unless other drugs are not likely to be effective or are contraindicated. Usage in pregnancy.** (See above **WARNINGS** about use during tooth development.)

Animal studies indicate that tetracyclines cross the placenta and can be toxic to the developing fetus (often related to retardation of skeletal development). Embryotoxicity has also been noted in animals treated early in pregnancy.

Usage in newborns, infants, and children. (See above **WARNINGS** about use during tooth development.)

All tetracyclines form a stable calcium complex in any bone-forming tissue. A decrease in fetal growth rate observed in premature given oral tetracycline 25 mg/kg every 6 hours was reversible when drug was discontinued.

Tetracyclines are present in milk of lactating women taking tetracyclines.

To avoid excess systemic accumulation and liver toxicity in patients with impaired renal function, reduce usual total dosage and, if therapy is prolonged, consider serum level determinations of drug. The antianabolic action of tetracyclines may increase BUN. While not a problem in normal renal function, in patients with significantly impaired function higher tetracycline serum levels may lead to azotemia, hyperphosphatemia, and acidosis.

Photosensitivity manifested by exaggerated sunburn reaction has occurred with tetracyclines. Patients apt to be exposed to direct sunlight or ultraviolet light should be so advised, and treatment should be discontinued at first evidence of skin erythema.

PRECAUTIONS: If superinfection occurs due to overgrowth of nonsusceptible organisms including fungi, discontinue antibiotic and start appropriate therapy.

In venereal diseases, when coexistent syphilis is suspected, perform darkfield examination before therapy, and serologically test for syphilis monthly for at least four months.

Tetracyclines have been shown to depress plasma prothrombin activity, patients on anticoagulant therapy may require downward adjustment of their anticoagulant dosage. In long-term therapy, perform periodic organ system evaluations (including blood renal, hepatic).

Treat all Group A beta-hemolytic streptococcal infections for at least 10 days.

Since bacteriostatic drugs may interfere with the bactericidal action of penicillin, avoid giving tetracycline with penicillin.

ADVERSE REACTIONS: Gastrointestinal (oral and parenteral forms): anorexia, nausea, vomiting, diarrhea, glossitis, dysphagia, enterocolitis inflammatory lesions (with monilia overgrowth) in the anogenital region.

Skin: maculopapular and erythematous rashes; exfoliative dermatitis (uncommon). Photosensitivity is discussed above (See **WARNINGS**).

Renal toxicity: rise in BUN, apparently dose related (See **WARNINGS**).

Hypersensitivity: urticaria, angioneurotic edema, anaphylaxis, anaphylactoid purpura, pericarditis, exacerbation of systemic lupus erythematosus.

Bulging fontanels, reported in young infants after full therapeutic dosage, have disappeared rapidly when drug was discontinued.

Blood: hemolytic anemia, thrombocytopenia, neutropenia, eosinophilia.

Over prolonged periods, tetracyclines have been reported to produce brown-black microscopic discoloration of thyroid glands; no abnormalities of thyroid function studies are known to occur.

USUAL DOSAGE: Adults—600 mg daily, divided into two or four equally spaced doses. More severe infections: an initial dose of 300 mg followed by 150 mg every six hours or 300 mg every 12 hours. Gonorrhea. In uncomplicated gonorrhea, when penicillin is contraindicated, 'Rondomycin' (methacycline HCl) may be used for treating both males and females in the following clinical dosage schedule: 900 mg initially, followed by 300 mg q.i.d. for a total of 5.4 grams.

For treatment of syphilis, when penicillin is contraindicated, a total of 18 to 24 gram of 'Rondomycin' (methacycline HCl) in equally divided doses over a period of 10-15 days should be given. Close follow-up, including laboratory tests, is recommended.

Eaton Agent pneumonia: 900 mg daily for six days.

Children—3 to 6 mg/lb/day divided into two to four equally spaced doses.

Therapy should be continued for at least 24-48 hours after symptoms and fever have subsided.

Concomitant therapy: Antacids containing aluminum, calcium or magnesium imp. absorption and are contraindicated. Food and some dairy products also interfere. Give drug one hour before or two hours after meals. Pediatric oral dosage forms should not be given with milk formulas and should be given at least one hour prior to feeding.

In patients with renal impairment (see **WARNINGS**), total dosage should be decreased by reducing recommended individual doses or by extending time intervals between doses.

In streptococcal infections, a therapeutic dose should be given for at least 10 days. **SUPPLIED:** 'Rondomycin' (methacycline HCl): 150 mg and 300 mg capsules, syrup containing 75 mg/5 cc methacycline HCl.

Before prescribing, consult package circular or latest PDR information.



WALLACE PHARMACEUTICALS
CRANBURY, NEW JERSEY 08512

Rev 12/



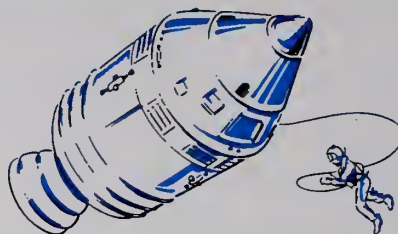
**When the focus is on bronchitis due to
susceptible strains of *H. influenzae* and pneumococci***

Rondomycin[®] 300 mg.
[methacycline HCl] Capsules

Delivers from the very first dose:

**Studies show that after the first dose serum levels rapidly rise above
minimum *in vitro* inhibitory concentrations**

*Since many strains are known to be resistant, routine sensitivity testing is recommended.



Man in space, now fait accompli, re-emphasizes the importance of Uro-Phosphate therapy. Research into the effect of space travel on the astronaut reveals that weightlessness causes loss of bone calcium. As the bones are required to bear less and less of the weight of the body they lose calcium, increasing the calcium content of the urine. When physical activity is reduced, the acidity of the urine should be adjusted to keep increased calcium in solution . . . o prophylaxis to prevent kidney or bladder calculi.

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Each tablet contains: METHENAMINE, 300 mg.; SODIUM ACID PHOSPHATE, 500 mg.

Uro-Phosphate gives comfort and protection when inactivity causes discomfort in the urinary function. It keeps calcium in solution, preventing calculi; it maintains clear, acid, sterile urine; it encourages

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Uro-Phosphate contains sodium acid phosphate, a natural urinary acidifier. This component is fortified with methenamine which is inert until it reaches the acid urinary bladder. In this environment it releases a mild antiseptic keeping the urine sterile.

Uro-Phosphate is safe for continuous use. There are no contra-indications other than acidosis. It can be given in sufficient amount to keep the urine clear, acid and sterile. A heavy sugar coating protects its potency.

Dosage:

For protection of the inactive patient 1 or 2 tablets every 4 to 6 hours is usually sufficient to keep the urine clear, acid and sterile.

2 tablets on retiring will keep residual urine acid and sterile, contributing to comfort and rest.

A clinical supply will be sent to physicians and hospitals on request.



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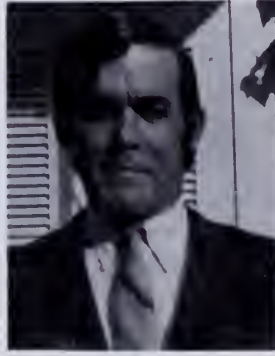
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More On Noise Pollution

According to the National Society for Medical Research, noise may do more than irritate people or cause physical damage to the ears, if observations by University of Wisconsin researchers can be proven to be applicable to humans.

The research team, which has just received a \$16,000 grant from the National Science Foundation for its studies, has found that monkeys listening to hours of hard rock music and constant machine noise become lethargic and quiet.

Perry M. Nealis, a senior psychology student heading the team of eight other students, says their findings might indicate that factory workers exposed to loud industrial noises each day may be driving home while they are less alert to their surroundings.

Nealis says his group found that the monkeys' plasma cortisol levels—a hormonal index which increases with stress—registered an average 60 per cent increase during experiments involving one hour exposure to

either hard rock music or industrial noise. The stress, based on this yardstick, decreased slightly after three hours and was not evident at all after five hours. This indicated that the animals adapted to the noise.

The monkeys, after five hours of such noise, displayed what Nealis calls withdrawal symptoms. The primates evidently played less and had vacant stares. They displayed a quiet, lethargic behavior as if fatigued.

Although he admits that these findings cannot yet be extended to cover human behavior under similar circumstances, but the feeling among the student researchers is that noise pollution may lower tolerance for frustration. Such an effect would lead to a sudden burst of anger on the part of an individual for what might seem to be no reason at all to observers.

Further studies will be undertaken and reported to the American Association for the Advancement of Science in December.

In 1818, during the first session of the House of Representatives of the Territorial Assembly of Alabama, a Representative from Monroe County petitioned for legislation placing control of the medical profession in the hands of physicians.

BLUE CROSS-BLUE SHIELD OF ALABAMA



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Dependability
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Before deciding to make Valium (diazepam) part of your treatment plan, check on whether or not the patient is presently taking drugs and, if so, what his response has been. Along with the medical and social history, this information can help you determine initial dosage, the possibility of side effects and the ultimate prospects of success or failure.

While Valium can be a most helpful adjunct to your counseling, it should be prescribed only as long as excessive psychic tension persists and should be discontinued when you decide it has accomplished its therapeutic task. In general, when dosage guidelines are followed, Valium is well tolerated (see Dosage). For convenience it is available in 2-mg, 5-mg and 10-mg tablets.

Drowsiness, fatigue and ataxia have been the most commonly reported side effects.

Until response is determined, patients receiving Valium should be cautioned against engaging in hazardous occupations requiring complete mental alertness, such as driving or operating machinery.



Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

Dosage: Individualize for maximum beneficial effect.

Adults: Tension, anxiety and psychoneurotic states, 2 to 10 mg b.i.d. to q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; adjunctively in skeletal muscle spasm, 2 to 10 mg t.i.d. or q.i.d.; adjunctively in convulsive disorders, 2 to 10 mg b.i.d. to q.i.d. **Geriatric or debilitated patients:** 2 to 2½ mg, 1 or 2 times daily initially, increasing as needed and tolerated. (See Precautions.) **Children:** 1 to 2½ mg t.i.d. or q.i.d. initially, increasing as needed and tolerated (not for use under 6 months).

Supplied: Valium® (diazepam) Tablets, 2 mg, 5 mg and 10 mg; bottles of 100 and 500. All strengths also available in Tel-E-Dose® packages of 1000.

Valium® (diazepam)

To help you manage excessive psychic tension

THE JOURNAL

of the

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Should old depressives be forgot?

geriatric depressive. Unable to concentrate he tends to have little interest in the affairs of his life. His reactions are slow and delayed. He speaks very little. When he does, it's mostly to complain of his insomnia, fatigue, or irritability.

One way of relieving depression in the geriatric patient is with Tofranil.

Please read the prescribing information for details of usage (lower dosages are recommended for elderly patients and adolescents), precautions, warnings, contraindications, adverse experiences, and dosage recommendations. It is summarized below.

Tofranil® Geigy imipramine hydrochloride USP



imipramine hydrochloride USP

Indications: The concomitant use of this agent with monoamine oxidase inhibiting (M.A.O.I.) compounds is contraindicated. Hyperpyretic crises or convulsive seizures may occur. Potentiation of effects can be serious or even fatal. An interval of 14 days after M.A.O.I. therapy has been used should be allowed before this drug may be initiated. Initial dosage should be low, increases should be gradual, and the patient's progress should be closely observed. The drug is also contraindicated during the acute recovery period after myocardial infarction, (b) in patients with known hypersensitivity to the drug. Cross-sensitivity to other dibenzazepine compounds should be kept in mind.

Warnings: *Usage in Pregnancy:* Safe use of this drug during pregnancy and lactation has not been established; therefore, in administering the drug to pregnant patients, nursing mothers, or women of childbearing potential, the potential benefits must be weighed against the possible hazards. Animal reproduction studies have yielded inconclusive results. There have been clinical reports of congenital malformations associated with the use of this drug, but a causal relationship has not been confirmed. Extreme caution should be used when this drug is given to:

patients with cardiovascular disease because of the possibility of conduction defects, arrhythmias, myocardial infarction, strokes and tachycardia; patients with increased intraocular pressure, history of urinary retention, or history of narrow-angle glaucoma because of the drug's anticholinergic effects;

thyroid patients or those on thyroid medication because of the possibility of cardiovascular effects;

patients with a history of seizure disorder because it has been shown to lower the seizure threshold;

patients receiving guanethidine or similar agents as imipramine may block the pharmacologic effects of these drugs.

Use in Children: Pending evaluation of results of clinical trials in children, the drug is not recommended for use in patients under twelve years of age. The drug may impair the mental and/or

physical abilities required for the performance of potentially hazardous tasks, such as operating an automobile or machinery, the patient should be cautioned accordingly.

Precautions: Because of the possibility of suicide in seriously depressed patients, careful supervision during the early phase of treatment is necessary and hospitalization may be required. Prescriptions should be written for the smallest amount feasible.

Hypomanic or manic episodes may occur, particularly in patients with cyclic disorders. Such reactions may necessitate discontinuation of the drug. If needed, imipramine may be resumed in lower dosage when these episodes are relieved. Administration of a tranquilizer may be useful in controlling such episodes.

Prior to elective surgery, imipramine should be discontinued for as long as the clinical situation will allow.

An activation of the psychosis may occasionally be observed in schizophrenic patients and may require reduction of dosage and the addition of a phenothiazine.

In occasional susceptible patients or in those receiving anticholinergic drugs (including antiparkinsonism agents) in addition, the atropine-like effects may become more pronounced (e.g. paralytic ileus). Close supervision and careful adjustment of dosage is required when this drug is administered concomitantly with anticholinergic or sympathomimetic drugs.

Patients should be warned that the concomitant use of alcoholic beverages may be associated with exaggerated effects.

Both elevation and lowering of blood sugar levels have been reported.

Concurrent administration of imipramine with electroshock therapy may increase the hazards; such treatment should be limited to those patients for whom it is essential.

Adverse Reactions: *Cardiovascular:* Hypotension, hypertension, tachycardia, palpitation, myocardial infarction, arrhythmias, heart block, stroke, falls.

Psychiatric: Confusional states (especially in the elderly) with hallucinations, disorientation, delusions; anxiety, restlessness, agitation; insomnia and nightmares; hypomania; exacerbation of psychosis.

Neurological: Numbness, tingling, paresthesias

of extremities; incoordination, ataxia, tremors; peripheral neuropathy; extrapyramidal symptoms; seizures, alterations in EEG patterns; tinnitus.

Anticholinergic: Dry mouth, and, rarely, associated sublingual adenitis; blurred vision, disturbances of accommodation, mydriasis; constipation, paralytic ileus; urinary retention, delayed micturition, dilation of the urinary tract.

Allergic: Skin rash, petechiae, urticaria, itching, photosensitization (avoid excessive exposure to sunlight); edema (general or of face and tongue), drug fever, cross-sensitivity with desipramine.

Hematologic: Bone marrow depression including agranulocytosis; eosinophilia; purpura; thrombocytopenia. Leukocyte and differential counts should be performed in any patient who develops fever and sore throat during therapy; the drug should be discontinued if there is evidence of pathological neutrophil depression.

Gastrointestinal: Nausea and vomiting, anorexia, epigastric distress, diarrhea; peculiar taste, stomatitis, abdominal cramps, black tongue.

Endocrine: Gynecomastia in the male; breast enlargement and galactorrhea in the female; increased or decreased libido, impotence; testicular swelling; elevation or depression of blood sugar levels.

Other: Jaundice (simulating obstructive); altered liver function; weight gain or loss; perspiration; flushing; urinary frequency; drowsiness, dizziness, weakness and fatigue; headache; parotid swelling; alopecia.

Withdrawal Symptoms: Though not indicative of addiction, abrupt cessation of treatment after prolonged therapy may produce nausea, headache and malaise.

How Supplied: Round tablets of 25 and 50 mg.; triangular tablets of 10 mg. for geriatric and adolescent use; and ampuls, each containing 25 mg. in 2 cc. for I.M. administration. (B)98-146-850-H (7/71)

For complete details, including dosage, please refer to the full prescribing information.

GEIGY Pharmaceuticals
Division of CIBA-GEIGY Corporation
Ardsley, New York 10502

TO 8575



When you select this familiar antibiotic for IV infusion you have available a broad dosage range that hospitalized patients may need.

Intravenous Lincocin (lincomycin hydrochloride, Upjohn), with its 1.2 to 8 grams/day dosage range, covers many serious and even life-threatening infections. Lincocin is effective in infections due to susceptible strains of streptococci, pneumococci, and staphylococci. Lincocin IV therefore can be as useful in your hospitalized patients as its IM use has proved to be in your office patients. As with all antibiotics, *in vitro* susceptibility studies should be performed.

1.2 to 8 grams/day IV dosage range:

Most hospitalized patients with uncomplicated pneumonias respond satisfactorily to 1.2 to 1.8 grams/day of Lincocin IV. These doses may have to be increased for more serious infections.

In life-threatening situations as much as 8 grams/day has been administered intravenously to adults.

In usual IV doses, Lincocin (lincomycin hydrochloride, Upjohn) should be diluted in 250 ml or more of normal saline solution or 5% glucose in water. But when 4 grams or more per day is given, Lincocin should be diluted in not less than 500 ml of either solution, and the rate of administration should not exceed 100 ml/hour. Too rapid intravenous administration of doses exceeding 4 grams may result in hypotension or, in rare instances, cardiopulmonary arrest.

Effective gram-positive antibiotic:

Lincocin IV is effective in respiratory tract, skin and soft-tissue, and bone



infections caused by susceptible strains of pneumococci, streptococci, and staphylococci, including penicillin-resistant strains. Staphylococcal strains resistant to Lincocin (lincomycin hydrochloride, Upjohn) have been recovered. Before initiating therapy, culture and susceptibility studies should be performed. Lincocin has proved valuable in treating patients hypersensitive to penicillin or cephalosporins, since Lincocin does not share antigenicity with these compounds. However, hypersensitivity reactions have been reported, some of these in patients known to be sensitive to penicillin.

Well tolerated at infusion site: Lincocin intravenous infusions have not produced local irritation or phlebitis, when given as recommended. Lincocin is usually well tolerated in patients who are hypersensitive to other drugs. Nevertheless, Lincocin should be used cautiously in patients with asthma or significant allergies.

In patients with impaired renal function, the recommended dose of Lincocin should be reduced to 25–30% of the dose for patients with normal kidney function. Its safety in pregnant patients and in infants less than one month of age has not been established.

Lincocin may be used with other antimicrobial agents: Since Lincocin is stable over a wide pH range, it is suitable for incorporation in intravenous infusions; it also may be

administered concomitantly with other antimicrobial agents when indicated. However, Lincocin should not be used with erythromycin, as *in vitro* antagonism has been reported.

Lincocin®

Sterile Solution (300 mg per ml)

(lincomycin hydrochloride, Upjohn)

For further prescribing information, please see following page.





Sterile Solution (300 mg. per ml.)

Lincocin[®]

(lincomycin hydrochloride, Upjohn)

Up to 8 grams per day by IV infusion for hospitalized patients with life-threatening infections.

Lincocin is effective in infections due to susceptible strains of streptococci, pneumococci, and staphylococci. As with all antibiotics, *in vitro* susceptibility studies should be performed.

Each preparation contains:

Lincomycin hydrochloride monohydrate equivalent to lincomycin base

250 mg Pediatric Capsule 250 mg
500 mg Capsule 500 mg
*Sterile Solution per 1 ml 300 mg
Syrup per 5 ml 250 mg

*Contains also: Benzyl Alcohol 9 mg; and, Water for Injection—q.s.

Lincocin (lincomycin hydrochloride) is indicated in infections due to susceptible strains of staphylococci, pneumococci, and streptococci. *In vitro* susceptibility studies should be performed. Cross resistance has not been demonstrated with penicillin, ampicillin, cephalosporins, chloramphenicol or the tetracyclines. Some cross resistance with erythromycin has been reported. Studies indicate that Lincocin does not share antigenicity with penicillin compounds.

CONTRAINDICATIONS: History of prior hypersensitivity to lincomycin or clindamycin. Not indicated in the treatment of viral or minor bacterial infections.

WARNINGS: CASES OF SEVERE AND PERSISTENT DIARRHEA HAVE BEEN REPORTED AND HAVE AT TIMES NECESSITATED DISCONTINUANCE OF THE DRUG. THIS DIARRHEA HAS BEEN OCCASIONALLY ASSOCIATED WITH BLOOD AND MUCUS IN THE STOOLS AND HAS AT TIMES RESULTED IN AN ACUTE COLITIS. THIS SIDE EFFECT USUALLY HAS BEEN ASSOCIATED WITH THE ORAL DOSAGE FORM BUT OCCASIONALLY HAS

BEEN REPORTED FOLLOWING PARENTERAL THERAPY. A careful inquiry should be made concerning previous sensitivities to drugs or other allergens. Safety for use in pregnancy has not been established and Lincocin (lincomycin hydrochloride) is not indicated in the newborn. Reduce dose 25 to 30% in patients with severe impairment of renal function.

PRECAUTIONS: Like any drug, Lincocin should be used with caution in patients having a history of asthma or significant allergies. Overgrowth of nonsusceptible organisms, particularly yeasts, may occur and require appropriate measures. Patients with pre-existing monilial infections requiring Lincocin therapy should be given concomitant antimonilial treatment. During prolonged Lincocin therapy, periodic liver function studies and blood counts should be performed. Not recommended (inadequate data) in patients with pre-existing liver disease unless special clinical circumstances indicate. Continue treatment of β -hemolytic streptococci infections for 10 days to diminish likelihood of rheumatic fever or glomerulonephritis.

ADVERSE REACTIONS: *Gastrointestinal*—Glossitis, stomatitis, nausea, vomiting. Persistent diarrhea, enterocolitis, and pruritus ani. *Hematopoietic*—Neutropenia, leukopenia, agranulocytosis, and thrombocytopenic purpura have been reported. *Hypersensitivity reactions*—Hypersensitivity reactions such as angioneurotic edema, serum sickness, and anaphylaxis have been reported, sometimes in patients sensitive to penicillin. If allergic reaction occurs, discontinue drug. Have epinephrine, corticosteroids, and antihista-

mines available for emergency treatment. *Skin and mucous membranes*—Skin rash, urticaria, vaginitis, and rare instances of exfoliative and vesiculobullous dermatitis have been reported. *Liver*—Although no direct relationship to liver dysfunction is established, jaundice and abnormal liver function tests (particularly serum transaminase) have been observed in a few instances. *Cardiovascular*—Instances of hypotension following parenteral administration have been reported, particularly after too rapid IV administration. Rare instances of cardiopulmonary arrest have been reported after too rapid administration. If 4.0 grams or more administered IV, dilute in 500 ml of fluid and administer no faster than 100 ml per hour. *Special senses*—Tinnitus and vertigo have been reported occasionally. *Local reactions*—Excellent local tolerance demonstrated intramuscularly administered Lincocin (lincomycin hydrochloride). Reports of pain following injection have been infrequent. Intravenous administration of Lincocin 250 to 500 ml of 5% glucose in distilled water or normal saline has produced local irritation or phlebitis.

HOW SUPPLIED: 250 mg and 500 mg Capsules—bottles of 24 and 100. *Sterile Solution*, 300 mg per ml—2 and 10 ml vials and 2 ml syringe. *Syrup*, 250 mg per 5—60 ml and pint bottles.

For additional product information, consult the package insert or see your Upjohn representative.

MED B-6-S (KZL-7) JA71-16

The Upjohn Company
Kalamazoo, Michigan 49001

Upjohn

President's Page



DR. PHILLIPPI

Merry
Christmas
and a
Prosperous and
Happy New Year!

Frank M. Phillippi, Jr.

Frank M. Phillippi, Jr., M. D.

The Woman's Auxiliary

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AUXILIARY PLEDGE

"I pledge my loyalty and devotion to the Woman's Auxiliary to the American Medical Association. I will support its activities, protect its reputation and ever sustain its high ideals."

An AMAERF Christmas Gift

Are you having a hard time choosing just the right Christmas present for the women in your life? Don't look any further. Go to your Medical Auxiliary's AMAERF Chairman who has an unusual selection of watches with a wide range of prices (\$15 to \$35).

You will find a suitable watch for any member of your family—wife, mother, daughter or aunt. These also make appropriate gifts for the women in your office. The same watch will cost you \$10 more at the jewelry store.

The nice part of this gift is that you will be making a donation to the American Medical Association Education and Research Foundation. Forty per cent of this money will be a gift to this fund and will be tax deductible for you.

If you really want to make points, give her a diamond ring, earrings, or pendant. These are man made, but only your jeweler will know. The cost is approximately \$35 per carat. These are sold on an individual basis. Write or call the State AMAERF Chairman, Mrs. Howard Johnson, 300 Gordon Drive, Sheffield, Alabama 35660—phone 383-4772. She has these diamonds in stock and will mail them to you immediately.

The Auxiliary has supported this foundation since it was started by the AMA in 1950. The purpose of the fund is to support medical schools and student loan guarantee funds. This money is given to medical schools for unrestricted use by the Deans



MRS. HANSBERRY

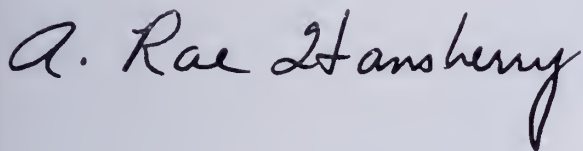
as they see fit to solve their most pressing financial needs. The student loan fund is available to medical students, interns and residents who have a financial need and cannot get money through conventional bank loans. This fund insures loans by guaranteeing repayment to the banks. As a result, the AMAERF-approved banks put another \$12.50 to work for each dollar contributed. The Deans of the medical schools make the approvals for the loans.

This is the only fund-raising project of the Auxiliary. Our goal this year is \$10 per member. Alabama more than doubled this same goal last year, and we are expecting to do even better this year with our 1553 mem-

bers. We are counting on the doctors to help us.

In 1951-52 the Woman's Auxiliary to the AMA contributed \$15,734 to AMAERF, in 1971-72 this total was \$740,388.58, and with a grand 20-year total of \$5,487,399.05.

Our Alabama contribution last year was \$32,815.66. We will be trying hard to break this record again this year. Alabama has had 261 students to receive loans through AMAERF from March 1962 through December 1971, using a total of \$324,850.



A. Rae Hansberry
President

LET EXTENDICARE PUT YOU IN PRIVATE PRACTICE— NO FEES

Our hospital communities in Alabama need:

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ENCE (replacement)

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Extendicare, Inc.

Professional Relations Department

P. O. Box 1438

Louisville, KY 40201

Attention: James R. Mattingly,
Director

Rural and Minority Medical Students To Receive Aid

Many rural and minority medical students in Alabama will receive special financial aid in the form of loans and scholarships as a result of a grant from the Robert Wood Johnson Foundation of Princeton, New Jersey.

Dr. Hugh Dempsey, director of student affairs at the University of Alabama in Birmingham (UAB) School of Medicine, announced receipt of \$94,966.92 from the foundation under its nationwide student aid program to increase the number of future doctors likely to enter practice in medically underserved areas.

The grant provides support over the next four academic years for scholarship and loan awards to women students, students from rural backgrounds, and those from the country's black, Indian, Mexican-American, and U. S. mainland Puerto Rican populations. The individual recipients and the amounts will be determined by the UAB medical school and not by the foundation.

The grant is part of a \$10 million program announced by the foundation last June to assist students in these categories through four year grants to all the nation's 108 medical schools and seven osteopathy schools.

The foundation focused the program on women students and students from rural and minority group backgrounds on the basis of evidence indicating that they are the most likely to choose practice locations in the country's underserved rural and inner city communities upon completion of their professional studies.

The grants reflect the foundation's goal of helping to improve access to medical care in American society, and comprise its first important effort since it began its transition to a national philanthropy early this year.

The student aid grants are being administered by the Association of American Medical Colleges under guidelines established by the foundation.



Physicians And The Public Health

1. Physicians have long been the stewards of health, including Public Health, in the State of Alabama. Indeed, the State Board of Health has been comprised of Doctors of Medicine since its inception. Our stewardship has never been, and is not now, questioned.

In the days when the Board of Health was concerned primarily with tuberculosis and venereal disease control; malaria, yellow fever, and mosquito eradication; and the prevention of other communicable diseases, there were few voices raised to offer assistance. Only with the advent of federally-assisted programs and the responsibility for large sums of money has come this sudden great interest in participation on the State Board of Health by other professions and occupations in the health services. One cannot help but wonder where these persons now offering assistance (and indeed insisting on representation) have been hiding during all those years of hard work spent attending to matters of public health with an underfunded operating budget.

2. The guise of "consumerism" is not valid in the context used in proposed legislation last year for expanding the State Board of Health. Consumer representation would not be enhanced merely by having a single pharmacist, optometrist, nurse, lawyer, or any other person on the State Board of Health. While indeed it may be desirable to have persons in authoritative, decision-making administrative positions related to health care as members of the State Board of Health, this does not lend itself to any improvement under the guise of consumerism.

The consumer in matters of health care is any person within the borders of the State of Alabama who is sick or injured; i.e., the patient. Assuming as an ideal situation every patient has access to a physician; whether Veterans Administration, University-based, private practitioner, or prepaid group practice, it is hoped that every patient can obtain the services of a physician. Now, what better method of consumer representation could possibly exist other than that every patient have his own treating physician as a member of the State Board of Health? It's up to us as members of the Medical Association of the State of Alabama to make sure this system works. Changes at the level of the Board of Censors may be necessary, but they should be thoroughly thought out to effect improvement, not just change.

3. As a matter of practical politics, physicians must stop trying to stay out of these matters. Each physician, whether he likes it or not, is under direct fire and his reputation, along with the future of medicine in this state, is on the line. We must obtain a working relationship with our local and state representatives. You should talk to him directly across his desk in his office, or over the telephone, if he's not in town. This should be followed by a concise letter or telegram. When he helps you, he deserves and should receive your thanks. When someone else's influence holds sway over yours, he should hear your displeasure.

Remember this: While it may not be ethical for you to mount a soap box on the sidewalk in front of your office, you still

(Continued on Page 400)

In 1852 Alabama physicians believed malaria was caused by the State's heat, moisture and "superabundant" vegetation. They called upon planters to establish drainage systems and clear wilderness areas.

BLUE CROSS-BLUE SHIELD OF ALABAMA



(Continued from Page 398)

treat hundreds of patients every month inside that office. And it's perfectly ethical for you to remind him that probably no other professional person in town comes into direct contact with that number of residents every month. And it's also perfectly ethical for you to remind him that your attitude

toward him (created by his record and performance, not by personal likes or dislikes) will necessarily at times be conveyed to some or all of those residents. Most of them are registered voters and they obviously value your judgment. Any politician, thus reminded, will listen—he has no choice!

Kenneth C. Yohn, M. D.

One Hundred Years Ago

Editor's Note: The following excerpts are from the annual oration delivered before the Medical Association of the State of Alabama on March 26, 1872 by Dr. J. S. Weatherly of Montgomery. They are presented here, because they closely parallel the present controversy over women's rights. We think the opinion expressed by one of the leading physicians of 100 years ago is of historical interest and indeed substantiates the advertising slogan, "you've come a long way, baby."

"The traditions of the past will avail us no longer, for woman has taken a new departure, and is now clamoring for rights and privileges, which she says have been so long withheld from her by man's brutal force. I shall, in the remarks which I am about to make, endeavor to do her full justice, not shutting my eyes to the inevitable march of events, or closing my ears to the pleasing sound of progress which is echoing throughout the world."

... "In discussing this subject, I feel that I shall have to tread upon tender and debatable ground, for the women of this country are on the alert, and are foremost in their demands for place and power. But while all probably feel some interest in the matter, a few are rushing headlong on the road which they say is progress, but which some good people think is progress in the wrong direction."

... "We hear a great deal of nonsense and twaddle, by both men and women, about the equality of the sexes. And, if the great law of nature had not been revolving in the same course for the last six thousand years,

we might suppose that the order of creation was to be reversed by those wise men and women, and that we were to have all men in this world, or at least a merging of one sex into the other at the pleasure of these people. Fortunately, the All-wise Creator stamped indelibly and unchangeably the difference between the sexes. All the speeches and resolutions of the Coman's Rights Conventions cannot change this grand eternal law of nature."

... "The great mistake of some of the women of this age is that they demand not only to do man's work, but, as a natural sequence, to be treated like men. Unhappy day for woman will it be when she succeeds in driving away from man's heart that innate feeling of chivalric sentiment which most men feel for her—the feeling that she is better and purer than he is—and we beg of the women of the period not to entirely efface the fancy, if you will, but a most pleasing one, from our minds."

... "There is no chivalry in labor or commerce, and when she enters the field as a rival to man she must not object at receiving the same treatment as male rivals. Whoever does the most and the best work must succeed. And if women do the same amount of work, and as well as men do it, of course they ought to receive the same pay. They must, however, submit to the same treatment, for they cannot be treated as men and women too."

... "It may be a long time before we of

the South have any experience with this trouble; our women, thank God are women still."

... "Soft as the memory of buried love,
Pure as the prayer which childhood
wafts above."

... "They have always kept aloof from the demoralizing issues of the day, and I feel proud that I can say to-night that our Southern women are the purest type of women upon the face of the globe. 'In that stillness which most becomes a woman, calm and holy,' the Southern woman 'sitteth by the fire-side of the hearth, feeding its flame.' May she continue so to do, furnishing an example of woman's duty to her aspiring Northern sisters."

... "In the discussion of the question, which occurred last spring in San Francisco before the American Medical Association, I stated, to the great amazement of some of my friends, that I would not hesitate to consult with a respectable and regularly graduated female physician. At the same time, I must add that I am firmly convinced that it is not woman's province."

... "Physicians, as a class, are large-hearted and, I might say with propriety, large-minded men, and I do not believe that they would entertain an unfounded prejudice for or against anything without a good reason. Yet I doubt if there be one doctor before me to-night who would be willing to see his wife, daughter, or sister begin any preparation for the purpose of entering the profession as a practitioner of medicine."

... "Few students, I imagine, can be found who would fancy carrying their sweethearts or sisters with them into the nauseous dissecting room or the dead house of a hospital. But it is to these places they are compelled to go if they would become educated physicians. Mentally, I do not doubt that women are just as capable of mastering the science of Medicine as men

are. That, however, it seems to me, is not the question to be decided; it is, whether or not it is expedient or best for them to enter the profession?"

... "No woman can control her nervous system. And I care not how strong-minded or progressive she is, she is subject and governed by peculiar conditions, which do not apply to man. Hysteria is second nature to them; the best and the worst are alike subject to it, as all medical men know, and though the truth may be unpalatable, it is the truth nevertheless."

... "As I have said in another part of this address, if I know my own heart, I have no narrow prejudice against female doctors. At the same time, I venerate the name of woman. And I wish, for the good of both sexes, for the broad distinction which has always been to remain between them. Woman's strength and safety is in her womanhood, and a true man will always respect it. Her great danger is from herself. In her vain efforts to ape the ways of man, she is running the risk of demoralizing both, for when men cease to treat and respect woman as woman her moral influence will be gone, and, without her influence for the cause of religion and morality, sin would hold high carnival in the world, and all intellectual and moral advancement will be at an end."

... "Women should be educated to the highest degree, mentally, morally, and physically, for they are responsible in a great measure for the good and bad deeds of the world."

... "I believe if we could have a land of pure, cultivated christian women, we would also, as a natural consequence, have one of cultivated christian gentlemen."

... "In such a land we would never hear of woman's rights, for both sexes would move in perfect accord."

The Current Scene -- Professional Liability

Factors Outside Of Medical Practice

Recently a girl fell on an allegedly defective sidewalk, cutting her head on a hydrant. A generation ago she might have recovered her out-of-pocket expenses, and perhaps a few hundred dollars for pain and suffering. This young girl asked, and was awarded \$260,570 for an ensuing "personality change." Everyone knows that court and jury awards—not just in professional liability, but for actions of every kind—reach new highs each year. In negligence liability actions, the increase isn't just in numbers of cases and amounts of recoveries, but in the different kinds of actions to which courts and case law are becoming more and more hospitable.

Because causes of action for professional liability are likely to be loose and fuzzy rather than defined and explicit, they are convenient vehicles for far-out allegations and ingenious new theories of direct and indirect injury. Doctor-defendants therefore suffer more from current trends, probably, than do other defendants. In measuring the effect upon the insurance rate-making process, one must remember that actual jury awards are only the tip of the ice-berg. One well publicized recovery inflates the settlement value of every outstanding and future claim. A single award has a financial impact on a hundred defendants in lawsuits yet to be tried or settled. This factor is beyond the control of the physician.

The newspaper treatment of professional liability verdicts is another factor over which physicians have little control. The press can't reasonably be blamed for the fact that medical mistakes make salable news, while the day-to-day medical successes do not. The properly performed cholecystectomy will never make the newspaper unless the patient is the President, but a failure is news if the patient decides to make it so by bringing suit. What is even worse is that these

claims are at once sensational and at the same time complex, and the reporter emphasizes the sensational while ignoring the complexities. Natural as this may be, its unfortunate result is to impair the credibility of doctor-defendants and their medical witnesses in the eyes of the public from which juries are drawn.

These factors are characterized as beyond the practical control of the physician. This is not to say that these areas, the inflated jury awards and uninformed coverage in the papers, are not completely beyond redemption. They'll respond, like all human foibles, to education. But physicians as individuals can do little to hasten that process, and should concentrate attention on issues more directly before them.

Within The Physician's Control

It is not the intent of this article to instruct physicians in the practice of medicine. However, from the vantage point of seeing claims and suits in quantity, patterns or trends of claim activity emerge. Here is a quick review of some areas which from the quantity viewpoint are known to be within the practical control of physicians.

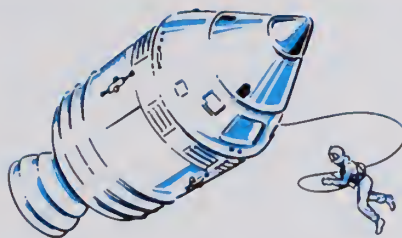
The Careless Comment

A great many professional liability claims originate in careless comments or rash criticism concerning the treatment given by another physician. The chances of this happening have been greatly multiplied by the move into the age of specialization. It is more than likely that today's patient will be seen by two to six physicians per illness or accident. Each specialist evaluates the work done by his predecessors on the case before forming his own opinion.

A careless comment or rash criticism at this point can be "the start of something big." It has been estimated that 65 to as high as 85 per cent of all claims have been triggered in just such a way.

There is and should be legitimate criticism;
(Continued on Page 455)

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sixty per cent over its normal size...
thus wedging himself tightly
in place and preventing capture.

Talk Before Alabama Health Study Commission

Luther L. Hill, M. D.
Montgomery, Alabama

Editor's Note: The following remarks were presented on October 19, 1972 before the Alabama Health Study Commission sitting as a task force assigned to recommend the future structure of the State Board of Health.

Mr. Chairman, I appreciate the opportunity of appearing before you to give my evaluation of the Board of Health and its problems. Mr. Cusic suggested that you were interested in the activities, legal directives, accomplishments of and constraints confronting the Alabama State Board of Health. It was further stated that you were particularly interested in the functions and controls of the State Board of Health.

I would like to direct my remarks first to the legal directives and controls. It is because of the wisdom of our legislators of many years ago that the Medical Association of the State of Alabama was designated the State Board of Health.

Physicians, individually and as a group, are, more than any others, interested in the health and welfare of the people. Who in his right mind would choose the life of personal sacrifice required of a physician unless he was motivated by a strong desire to help his fellow man by treating the sick and attending the injured?

I think it is also significant that the physicians wage a constant war on the health quacks and cultists—going out of their way to do so, while at the same time, almost uniformly contributing financially each year to their alma maters to train other physicians—not as competitors but as aides in fighting illness.

There are three bronze statutes on the lawn in front of our capitol. One of these is the President of our Confederate States.

Standing there with President Jefferson Davis are two physicians, Dr. John Allen Wyeth and Dr. James Marion Sims. It is significant to me that the people of our state have so honored these men and are saying that they appreciate the contribution they have made to their health and welfare.

The laws of the state further designate that the Board of Censors of the Medical Association of the State of Alabama—the group chosen to oversee the operation of the Medical Association—shall also have the responsibility of acting as the Committee of Public Health or as the equivalent of the State Board of Health when the entire Association is not in session.

Gentlemen, this again demonstrates the wisdom of the Legislature, because it is quite obvious that the Medical Association would elect the best men possible to run its affairs. I say this with great humility because I do not want to be misunderstood. I am on that Board. I do not mean to imply that I am one of the best men in the Association. Any group is entitled to make one mistake, but can't you hear the Legislators say to the Medical Association, "Look, the men you choose to run your Association are the ones we want to run the Health Department."

During my tour of duty on the Board of Censors, I have seen the personnel change almost completely and yet there has always been a dedication of all the members to their responsibilities. It is almost unheard of for a member to be absent unless he is ill, there is an illness in his family, or unless he is out of the country.

It has meant a great deal to me personally, and I am sure to the others, to be a member

of this Board because it has increased our opportunities of being of service to our people. At the conclusion of these meetings, we feel that we have accomplished something worthwhile. We have really done something constructive. Now I do not mean that the Board should continue because of the personal feelings of its present members, but I cannot help but wonder whether with a group of less motivated people, will the decisions be as adequate? Will the attendance at the meetings fall down to perhaps 50 per cent? Will it be like so many of the committee or commission meetings where it is difficult to get a quorum? Our pay for these Committee of Public Health meetings is 10¢ per mile travel and approximately \$6.50 per diem. If you live in Montgomery, it is exactly nothing, and yet a meeting is rarely missed by a Board of Censors member.

During my period of service, many thousands of problems have arisen and the answers have always been what is right, what is honest, and what is best. As a matter of fact, we have had to say "no" to the requests of some of our friends and perhaps make enemies of them—this we regret, but decisions should be made on the basis of what is right, what is honest.

Should there be a conflict between the interests of a physician and the interests of the people of the state, it is not difficult to make the decision for the people as a whole. After all, the power is given to us by the people to make this decision and such a sacrifice is not comparable to the total sacrifice that must be made in times of war by any individual for the welfare of the whole. I am sure that these sacrifices are very real to some of you.

The laws designating the Medical Association of the State of Alabama as the Board of Health appear in Title 22 of the Code of Alabama. This title also describes the State Committee of Public Health. The entire Chapter 1 refers to Health Laws and Regulations. Paragraph 7 of this chapter gives the Committee of Public Health authority and

jurisdiction: (1) To exercise general control over the enforcement of the laws relating to public health. (2) To investigate the causes, modes or propagation, and means of prevention, of diseases. (3) To investigate the influence of localities and employment on the health of people. (4) To inspect all schools, hospitals, asylums, jails, almshouses, theatres, operahouses, courthouses, etc., and other places of like character, whenever unsanitary conditions in any of these places, institutions, or establishments, or conditions prejudicial to health, or likely to become so, are found, proper steps shall be taken by the proper authorities to have such conditions corrected or abated. (5) To examine the source of supply, tanks, pumping stations, and avenues of conveyance of drinking water, and whenever these waters are found polluted, or conditions are discovered likely to bring about their pollution, proper steps shall be taken by the proper authorities to improve or correct conditions. (6) To adopt and promulgate rules and regulations providing proper methods and details for administering the health and quarantine laws of the state, which rules and regulations shall have the force and effect of law and shall be executed and enforced by the same courts, bodies, officials, agents, and employees as in the case of health laws. (7) To exercise supervision and control over county boards of health and over county health officers and county quarantine officers in the enforcement of the public health laws of the state in their respective counties. (8) To act as an advisory board to the state in all medical matters and matters of sanitation and public health.

Par. 19 of chapter 1 gives the responsibility for the registration of the births and deaths and still births to the State Board of Health. Par. 54 describes the responsibilities of the State Board of Health in the presence of epidemics.

Par. 60 thru 70 refer to barbers and beauticians and relates their responsibilities to maintain standards of sanitation and freedom from infectious, contagious, and venereal

diseases. It deals with their responsibilities to the Health Officers.

Par. 73 concerns sanitary privies.

Par. 74 refers to isolation of patients with certain infectious diseases—46 in number and the possible isolation of over 17 others.

Par. 81 thru 84 refer to tuberculosis and its problems.

Par. 85 outlines the regulations of the State Committee of Public Health for the operation of food handling establishments, hotels, motels, slaughter houses, etc.

Par. 86 thru 88 refer to interment of deceased persons.

Par. 97 refers to the treatment of persons bitten by rabid animals.

This is a brief description of the contents of Chapter 1.

Chapter 1A concerns comprehensive health planning.

Chapter 2 concerns rabies.

Chapter 3 concerns water works and water supplies.

Chapter 3A concerns water improvement commissions.

Chapter 4 concerns quarantine laws and regulations.

Chapter 5 and 5A refer to distribution of unclaimed bodies for scientific and medical purposes.

Chapter 6 refers to hospitals.

Chapter 7 refers to the Milk Control Board.

Chapter 7A and 7B refer to the health regulations governing milk, its testing and grading.

Chapter 8 refers to Narcotic Drugs and Poisons.

Chapter 9 refers to Marijuana.

Chapter 9A refers to Barbiturates.

Chapter 9B refers to Heroin.

Chapter 10 refers to Retail of Certain Poisons.

Chapter 11 refers to Venereal Disease.

Chapter 12 refers to Cancer Control.

Chapter 13 refers to Radiation Control.

Alabama Act 446 (1966 Special Session of the Legislature) implements the comprehensive health planning within the state. The act establishes the State Board of Health as the sole agency for the conduct of planning operations. The Comprehensive Health Planning Agency is an important tool of the Board of Health. The rapidly developing plan should help a lot in defining the need for health services in many areas.

But enough of the legal directives and controls. I would like to talk of its activities and functions.

The Alabama State Board of Health in supervising the activities of the State Health Department assumes the responsibility for it and we are proud of its accomplishments.

As smallpox, typhoid fever, and diphtheria had been subdued by vaccines in other years, development of a live virus polio vaccine virtually eliminated that crippling disease from Alabama during the past decade. In 1963-64, "Polio Sundays" were held throughout the state. Adults and children were urged to come out to the neighborhood centers for their dose of the vaccine on a sugar cube. Over 6.5 million doses were administered, and only two cases of polio have been reported in Alabama since 1964.

In mass campaigns to eliminate rubella and rubeola in subsequent years, well over a million immunizations were administered in special public health clinics. These figures do not include those immunizations administered at county health departments in their regularly scheduled clinics. It is estimated that more than 50 per cent of infants born in Alabama are dependent upon public health clinics for their basic series of immunizations.

Sixteen diseases regularly reported to the State Health Department declined in inci-

dence during 1961-71. Two of the most notable ones are tuberculosis, which showed a decline of about 27 per cent, and syphilis, which declined by 80.8 per cent between 1965 and 1971. Tuberculosis was steadily climbing during the early 60's. From 1,357 new cases in 1961, the yearly count had grown to 1,417 new cases in 1965. In 1966 the Health Department launched a tuberculin skin testing program. Over a million Alabamians—most of them children—have received skin tests for TB administered by Public Health personnel since 1966. Intensified casefinding efforts in combination with a prophylactic treatment program paid dividends and only 985 new active TB cases were reported in 1971. Alabama had the dubious honor in 1965 and 1966 of ranking number one in the nation in syphilis. In 1965 Alabama had 1,417 new primary and secondary syphilis cases and a case rate per 100,000 population of 41.2. The national case rate is 12.2. Rapid epidemiology, prophylactic treatment, and aggressive case management brought Alabama's case rate down dramatically. This truly remarkable record was due to the intelligent perseverance of one of our underpaid state Health Department employees, Dr. W. H. Y. Smith. Alabama dropped below the national case rate in 1969 for the first time since records have been maintained and has remained below the national average for three consecutive years. Alabama reported 175 new primary and secondary syphilis cases in 1971 for a 5.0 case rate, and a decline of 87.6 per cent since 1965. The financial base for program operations was primarily Federal grants. As success was achieved, Federal funding began to diminish with no corollary increase in state funding. For effective control to be maintained, continuing state financial support must be realized.

During 1971 Alabama reported 29 maternal deaths, a 50 per cent reduction since 1961. Maternal and child health improved in every aspect during the decade: infant deaths decreased from 2,491 to 1,534; neonatal deaths declined from 1,673 to 1,088; fetal deaths

dropped from 1,717 to 1,079. More than one-fourth of all pregnant women depend upon health department facilities during their pregnancies. Public Health clinics served 14,734 maternity patients during 1971.

Two mammoth programs of medical care were launched during the previous decade. Public Health is vitally involved in both. Services under Medicare began July 1, 1966, and services under Medicaid began January 1, 1970. Sixty-four county health departments are providing home health services under the Medicaid and Medicare programs. Home health services bring skilled nursing care and supportive services to homebound patients. If these services were not available, many of these patients would have to be hospitalized or placed in nursing homes.* The State Health Department is responsible for certification of all health facilities for participation in Medicare and Medicaid. The certification program has resulted in substantial improvement of physical facilities and services offered by health care institutions. Since 1949, the State Board of Health has been responsible for licensing and administering standards to all inpatient facilities not Federally owned or under the supervision of the State Board of Mental Health. It is noteworthy that during 1961-1971, as a result of direct or indirect action of the state agency, 43 sub-standard hospitals, 23 sub-standard nursing homes and 13 related facilities were closed.

Environmental health received considerable emphasis during the past decade. Public Health moved ahead rapidly in developing a strong air pollution control program, establishing a solid waste disposal program, strengthening its water pollution control program, and establishing a radiological health surveillance and control program. Alabama has had a water pollution control pro-

*On November the 30th of 1971 the Department of Health Education and Welfare of the Federal Government announced that 39 states faced the cut off of Federal Funds, due to significant deficiencies in procedures in certifying medicaid programs. Alabama was not included among the 39.

gram since 1947. However, new legislation was needed to permit stricter enforcement. Control of water pollution from municipal sources progressed at a rapid rate. During 1962-70 more than \$120 million was spent on construction of collection systems, pumping stations, and municipal treatment plants. By the end of 1970, some 58 per cent of Alabamians were served by sewage collection systems having adequate secondary treatment.

Alabama has the fourth largest public health laboratory in the United States from the standpoint of number of specimens examined. In 1971 the Bureau of Laboratories examined 890,188 specimens, an increase of 59 per cent over the 528,169 specimens examined in 1961. Laboratory personnel made more than 1.5 million examinations in 1971. Although the Alabama Public Health laboratories ranked fourth in volume of work, it ranked 13th among all the states in expenditures per capita. Forty-one states spent more than Alabama on professional and technical laboratory employees. Some highly specialized tests in virus serology are not available from any laboratory in Alabama other than the Public Health Laboratory. The Public Health Laboratory is a reference laboratory in mycology and VDRL testing for the Center for Disease Control, Atlanta, and some other state laboratories. The Public Health Laboratory maintains a record of 100 per cent accuracy in identifying unknown specimens. As new tests of public health application are developed, the Bureau of Laboratories modifies its program to include these new procedures. Major modifications to the Laboratory program during 1961-71 include:

- introduction of complete virus testing (serological and isolation) for the entire state.

- introduction of Group A streptococcus culturing for the entire state.

- provision of ancillary testing for the Bureau of Maternal and Child Health's ma-

ternity clinics, including Rh typing and Papanicolaou smears.

- provision of tests for all types of fungi.

- application of fluorescent antibody techniques to about 15 procedures.

- initiation of screening for genetic diseases, including PKU.*

- initiation of statewide testing for abnormal hemoglobins (sickle cell and others).

- initiation of rubella testing.

- initiation of testing for hepatitis-associated antigen.

Your Health Department has the following active programs operating at the present time:

Medical Services Administration, Title XIX;

Dental Health Services for Children, Title XIX;

Intermediate Care Program, Title XIX;

Screening Children for Health Defects and Referral, Title XIX;

Hearing Aids for Children, Title XIX;

Hospital Services for Indigent;

Home Health Services;

Maternal and Child Health;

Family Planning Services;

Tuberculosis Hospitals;

Tuberculosis Control;

Immunization Program;

Health Mobilization;

Venereal Disease Control;

Epidemiology;

Cancer Control;

Heart Disease Control;

Narcotics and Dangerous Drugs;

*This is truly a remarkable program, not only because of its practical value of preventing mental retardation, but from the standpoint of the coordination required between the state laboratory, the pediatrician and the baby's mother.

(Continued on Page 424)

"The history of science, and in particular the history of medicine... is... the history of man's reactions to the truth, the history of the gradual revelation of truth, the history of the gradual liberation of our minds from darkness and prejudice."

— George Sarton, from "The History of Medicine Versus the History of Art"

**Are combination drug
products useful in treatment
involving concomitant use
of two or more drugs?**

Opinion

**Results of a questionnaire to
7,000 physicians:**

62.9%

**Believe combination drug
products are useful.**

13.8%

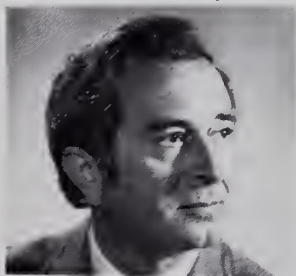
**Do not believe combination drug
products are useful.**

Are combination drug products useful in treatment involving concomitant use of two or more drugs?

Opinion & Dialogue

Doctor of Medicine

Louis Lasagna, M.D.
Professor and Chairman
Department of
Pharmacology & Toxicology
University of Rochester
School of Medicine
and Dentistry



Obviously, many drugs are given concomitantly. Whether it makes sense to combine medications in one preparation, be it capsule, tablet, or liquid, is a question that can be answered only by examining the advantages and disadvantages in the individual case.

Among the advantages is, first of all, convenience. The more medications that are taken concurrently and the more complicated the directions, the less likely the patient is to take medications accurately. From the standpoint of convenience and accuracy, and economy as well, you can make an important case for putting medications together in one preparation, as long as they are compatible.

By the same token, when you prescribe a properly tested and rational combination, you should have less worry about pharmaceutical or pharmacological compatibility — and about reasonable dosage ratios as well. Compatibility of the formulation should be demonstrated in the laboratory and clinic before the product is available for prescription—which is more than can usually be said for

the physician's own spontaneous creations. And, the dosage ratios employed in rational precompounded combinations are designed to meet the needs of substantial numbers of "typical" patients.

There is no doubt that many "atypical" patients are to be found, and for them the prefabricated combination must be rejected. But that hardly argues for eliminating rational combinations from the market. Think, for example, of the problems that would arise if the components of widely accepted combinations, like the oral contraceptives and the diuretic-antihypertensives, always had to be prescribed, purchased and ingested separately.

One disadvantage that comes to mind is some doctors' unawareness of the ingredients a given combination contains. For example, a doctor might know that a patient is allergic to aspirin but forget that a certain analgesic mixture, which he knows only by its trade name, contains aspirin. His prescription, then, causes considerable discomfort, to say the least. This problem is a function of physician education, rather than of combination therapy as such. Improving doctors' knowledge about all medicaments they prescribe is a problem that deserves tackling on its own.

Another accusation leveled at combination drugs is that they encourage sloppiness of diagnosis and treatment. In many cases, however, a combination may prove to be the most effective choice. A good ex-

ample of the usefulness of combinations appears in a recent article in the *Journal of Chronic Diseases* on the efficacy and side effects of an antihypertensive containing three ingredients, in which the track records of the combination drug and the individual ingredients were compared. Interestingly enough, whether the drugs were given individually or together, incidence and severity of side effects were the same. But blood pressure control was invariably better when the drugs were taken in one combination tablet than when they were taken separately (in "titratable" dosage) or in two or three different tablets.

Deciding which combinations constitute rational therapy obviously leads to a discussion of who is to determine which should be used and which should not. Realistically, I think combinations should be evaluated somewhat differently if they are old and established or new and untried.

In today's regulatory atmosphere, there is no possibility of a new combination being put on the market without a substantial amount of acceptable evidence in the form of controlled trials that show it to be safe and efficacious. On the other hand, I believe a different set of standards should apply to combination preparations that have been around for a long time. In other words, physician acceptance over a long period should be given some weight as evidence of the efficacy and safety of these drugs.

The FDA, however, does not seem to share this attitude. It often requires, for these older products, controlled trials that will monopolize the time of already overtired investiga-

tors and cost a great deal of money. I wish we could agree on a "grandfather clause" approach to preparations that have been in use for a number of years and that have an apparent satisfactory track record.

For example, I think some of the antibiotic combinations that were taken off the market by the FDA performed quite well. I am thinking particularly of penicillin-streptomycin combinations that patients—especially surgical patients—were given in one injection. This made for less discomfort for the patient, less demand on nurses' time, and few opportunities for dosage errors. To take such preparation off the market doesn't seem to be good medicine, unless actual usage showed a great deal of harm from the injection (rather than the proposed use) of the combination.

The point that should be emphasized is that there are both rational and irrational combinations. The real question is, who should determine which is which? Obviously, the FDA must play a major role in making this determination. In fact, I don't think it can avoid taking the ultimate responsibility, but it should enlist the help of outside physicians and experts in assessing the evidence and in making the ultimate decision.

Maker of Medicine

W. Clarke Wescoe, M.D.
President
Winthrop Laboratories



combinations generally. Obviously, no one should be exposed willy-nilly to the potential side effects of two or three antibiotics when only one is needed. At the same time there are cases where it is prudent to prescribe more than one. The clinician is the judge in these circumstances, as he should be.

There is no clear definition of the word rational. Most persons, I suppose, would find it synonymous with reasonable, but in many circumstances it may best be defined as the opinion of those in power at the moment.

Other factors govern combination therapy, not the least of which has been its broad use by practicing physicians anxious to achieve convenience in prescribing, to reduce medication error, and to save money for their patients. Combinations clearly have met the test on all three counts.

I have been impressed by studies showing that the rate of error climbs markedly with the number of medications to be taken, even with sophisticated patients. When medically justified, therefore, this factor alone supports the logic of combination therapy.

The cost argument for combinations appears to be irrefutable. In 1971, R. A. Gosselin studied the 71 combination products (excluding oral contraceptives) among the 200 most prescribed drugs. The study found that if all 71 products were discontinued, and if each ingredient in these combinations were prescribed separately, the price of medicines to patients would jump by \$443.2 million on a national basis! At a time when the cost of medical care is under so much fire, it would be nonsensical to boost costs without clearly irre-

futable medical reasons.

The part played by government on this question, of course, is fundamental. The FDA should play a role in determining which combinations are reasonable. That role, as defined by law and regulation, is to ensure that any medication on the market is safe and effective in line with its label claims. Certainly combinations are entitled to as much consideration as single entities—neither more nor less. So long as the addition of one drug to another does not make either less safe, or less effective, so long as they are compatible in a formulation, we have a reasonable product. It makes no sense to recommend the use of two products for certain conditions and to deny their being combined in a single form. An unhappy side effect of the problem concerns the efficacy panel discussions of many products submitted for review. The term "effective, hut" has been freely interpreted to mean "ineffective" in toto, regardless of the merit of the individual drugs. This interpretation has placed numerous useful combination products in needless jeopardy.

In reading the actual reports of the review panels, it seems clear that some of the ratings were based less on scientific research and clinical observation than on the "informed" opinions of the panelists. These "informed" opinions were accepted at face value, while

the "informed" opinions of others who had used the products were rejected. All of this put combination products into a sort of scientific never-never land.

It should be kept in mind by all, government as well as others involved in our health care system, that advances in therapy are seldom made in leaps and bounds but rather by small painstaking steps—and that some of these steps have resulted from research in combination drugs as well as with single entities. Given the near-infinite biologic variation in patient response, this is hardly surprising to clinicians. It should not be to regulatory agencies either.

In the end, the practicing physician is in the best position to decide if a particular combination makes sense. Such a decision should not be made exclusively by those whose responsibility for continuing clinical care is limited. Clinicians are the best judges of efficacy because the ultimate proof of any product's effectiveness is acceptance by physicians who have observed its actions in patients over time. The corollary statement may be made about over-the-counter medicines, which would not long survive if they failed to afford the relief the user anticipates. That the antihistamine in a "cold" remedy may not *always* be necessary is no reason to proscribe the combination generally.

Opinion & Dialogue

What is your opinion, doctor?

We would welcome your comments.



The Pharmaceutical Manufacturers Association
1155 Fifteenth Street, N.W., Washington, D.C. 20005

If two medications are used effectively to treat a certain condition, and it is known that they are compatible, it clearly is useful and convenient to provide them in one dosage form. It would make no sense, in fact it would be pedantic, to insist they always be prescribed separately. To avoid the appearance of pedantry, the "expert" decries the combination because it is a fixed dosage form. When the "expert" invokes the concept of fixed dosage form he obscures the fact that single-ingredient pharmaceutical preparations are also fixed dosage forms. By a singular semantic exercise he implies a pejorative meaning to the term "fixed dose" only when he uses it with respect to combinations. What is ignored is the simple fact that only in the rarest of circumstances does any physician attempt to titrate an exact therapeutic response in his patient. It is quite possible that some aches and pains will respond to 500 mg. of aspirin yet that fact does not militate against the usual dose being 650 mg.

The other semantic ploy often called into play is to describe a combination product as rational or irrational.

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Permanent Pacemakers: Experience In A Community Hospital

Edward H. Laughlin, M. D., F. A. C. S., Huntsville, Ala.

In 1960, it was suggested that permanent pacemakers might be implanted in individuals with complete heart block to provide the continuous stimuli needed to increase cardiac rate.¹ In the beginning permanent pacing involved transthoracic implantation of electrodes into the myocardium, but since the mid 1960's the use of endocardial electrodes introduced via a peripheral vein has largely replaced epicardial electrodes, reducing the significant morbidity and mortality associated with thoracotomy in the elderly or critically ill patient.

Background

In the normal heart cardiac rate is controlled by the sinoatrial (S-A) node, the "heart's own pacemaker." This node under hormonal and nervous influence initiates minute electrical impulses that spread over the atria to the atrioventricular (A-V) node, then down the Bundle of His to the ventricles; resulting first in contraction of the atria followed immediately by contraction of the ventricles. In the EKG atrial contraction or depolarization is depicted by the p wave, while ventricular contraction is seen as the qrs complex. In heart block defective conduction of normal impulses from atria to ventricles is characterized in the EKG by complete dissociation of the p

wave and qrs complex. Experimental complete heart block is produced by cutting or crushing the Bundle of His. Clinical heart block which may be temporary, intermittent or permanent, is most often associated with coronary heart disease, but may be caused by congenital heart defects, degenerative disease, cardiac surgical procedures, drug intoxication, or electrolyte imbalance.

An artificial pacemaker provides a source of electrical energy to initiate ventricular contractions at a rate greater than the idioventricular rate, and consists of two components; an electrode lead, and pulse generator containing the energy source and complex timing and output circuits. At present the most widely used pacemakers are the non-demand and demand. The former provides an electrical impulse to the heart at a constant rate irrespective of the intrinsic ventricular rate, while the demand pacemaker utilizing a more complex generator "senses" the ventricular rate and provides an impulse only if cardiac rate falls below a predetermined level. Except for those symptoms resulting from congestive heart failure most of the signs of heart block stem from intermittent cerebral ischemia due to diminished cardiac output; the Stokes-Adams syndrome, a clinical picture ranging from dizziness to coma, with or without convulsions.

Indications for permanent cardiac pacing include:

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1. Acquired complete (3rd degree) heart block regardless of symptoms.
2. Symptomatic congenital complete (3rd degree) heart block.
3. Symptomatic bradyarrhythmias caused by other than complete heart block.
4. Tachyarrhythmias not controlled by drugs or cardioversion.

Technique

All operative procedures are carried out in the X-ray department utilizing an image intensifier, and the patient monitored by a recording EKG machine. Most implantations are carried out under local anesthesia and sedation, but one surgeon preferred general anesthesia for all cases. In order that the pulse generator can be placed over the upper chest the cutdown site for insertion of the lead is the jugular vein or one of the subclavian venous branches. We prefer to use the cephalic vein, but the ultimate choice depends upon the size of the vein and the position of the temporary pacing catheter. Because of the large amount of foreign material implanted sterile technique must be observed and meticulous hemostasis must be maintained.

A transverse incision made below the midpoint of the clavicle to the top of the anterior axillary line is carried down to the deltopectoral groove where the cephalic vein is isolated. The flexible catheter made more rigid by steel stylets inserted into its lumen is advanced thru the subclavian vein into the superior vena cava. We have found that if the stylets are then withdrawn from the lumen of the catheter its flexibility will allow blood flowing into the right heart to carry the tip of the lead into the right atrium and through the tricuspid valve. Once in the right ventricle the catheter again made more rigid by insertion of the stylets is advanced toward the apex of the right ventricular chamber where it is wedged beneath the trabeculae. Threshold, the minimal amount of current necessary to initiate a ventricular response after every pacer

maker impulse, is determined by means of a temporary pacing generator with variable current output. A current of 1.5 milliamperes or less indicates good position of the electrode and satisfactory endocardial contact. Following complete removal of the intralumenal stylets the catheter is securely transfixed to the vein with non-absorbable suture. The pacing catheter is then disconnected from the external generator, carefully attached to the implantable generator, and the electrical activity and ventricular response once again noted on the EKG.

Even in the obese patient an implantable generator that weighs 200 grams and is approximately the size of a shoe polish can be uncomfortable because it tends to shift when the patient leans over. In the thin patient the subcutaneous pulse generator can erode the overlying skin. To lessen discomfort and prevent skin erosion we have devised a method of implanting the pacing generator beneath the pectoral muscle. Through the same incision used to isolate the cephalic vein in the upper chest the superior portion of the pectoralis major muscle is exposed and its fibers separated. The dissection is carried down to the minor pectoral muscle where it inserts on the coracoid. This tendinous insertion is divided with little bleeding, and the minor muscle immediately retracts to leave a pocket that can accommodate the rather bulky pulse generator. The wound is closed with absorbable suture after Hemovac catheters are placed in the pocket. Spray dressing is applied and broadspectrum antibiotics begun via the IV route. Following a chest film to insure correct position of the endocardial catheter the patient is returned via the recovery room to the coronary care unit and monitored continuously for 24 hours. During the postoperative period the individual is encouraged to actively use his arm such as a post mastectomy patient is encouraged to do. All recipients of pacemakers are followed at least every three months and are instructed to count their pulse for one full minute twice a day, with implicit instructions to report

PERMANENT PACEMAKERS

PERMANENT PACEMAKER, EXPERIENCE WITH 15 PATIENTS

				INDICATION	TYPE	RESULT
1.	7-69 12-72	68M	269121	ASHD with 3° Block Routine Replacement	Non-Demand Non-Demand	Excellent Excellent
2.	7-69 11-69 11-71	75F	269052	ASHD with 3° Block Failure Replacement Routine Replacement	Demand Demand Demand	Malfunction 16 Wks Excellent Excellent
3.	2-70 2-72	72M	278349	ASHD Sinus Bradycardia Routine Replacement	Demand Demand	Excellent Excellent
4.	3-70	79M	279299	ASHD Variable Block S-A	Demand	Lost to Followup
5.	4-70	61F	C26527	Acute MI 3° Block (Temp) Routine Replacement	Demand Demand	Excellent Excellent
6.	5-70	57F	261614	Sinus Bradycardia S-A	Demand	Excellent; Cholecystitis
7.	6-70	49M	283072	Marie Strumple 3° Block Replacement Unit and Cath.	Non-Demand Demand	Competitive Rhy. Excellent
8.	7-70	77F	285294	ASHD with 3° Block S-A	Demand	Skin Erosion, 2-7
9.	12-70	48M	C29895	Acute MI Sinus Brady (Temp)	Demand	Removed, 1-72
10.	1-71	57F	292673	ASHD with 3° Block	Non-Demand	Excellent; Herniorrhaphy
11.	2-71 +11-72	64F	294322	DASHD with 3° Block S-A Failure Replacement	Non-Demand Demand	Competitive Rhythm, S-A <u>Expired 1 week,</u> <u>Cong. Failure</u>
12.	5-71	75M	M11262	Acute MI 3° Block (Temp)	Demand	Excellent
13.	11-71	69F	C33706	Acute MI 3° Block (Temp)	Demand	Intermittent Cong. Failure
14.	2-72	67M	C35121	ASHD with Winkeback S-A	Demand	Excellent
15.	2-72	69M	311456	ASHD with 3° Block	Demand	Excellent

[Table 1]. Twenty-two permanent pacemakers implanted in 15 patients. S-A denotes Stokes-Adams syndrome; (Temp) denotes temporary pacing catheter previously placed.

immediately any change in rate or rhythm. It has been impossible to ascertain when there is impending total battery depletion and for this reason we are generally replacing the generator units every 24-30 months.

Clinical Experience

There have been 22 implantations of permanent pacemakers in 15 patients during the 32 months from July, 1969, through February, 1972. The average age of the eight male and seven female patients was 66 years. The most common indication for permanent pacing was complete (3rd degree) heart block associated with coronary heart disease. Case 7 is of interest because of the unusual occurrence of heart block associated with

Marie-Strumple arthritis.² Five patients had bradyarrhythmias. Only four individuals had documented acute myocardial infarction as the cause of their heart block, and each had a temporary pacing catheter in place when permanent pacing was begun. Medtronic pacemakers accounted for all but one implantation in which a Cordis unit was used, and 17 were demand pacemakers and five were non-demand.

We have achieved followup in all but one case. The first four patients have now had "routine" replacements, and patient (3) with initial generator failure and recurrent Stokes-Adams attacks is presently pacing well with his third unit. The sixth individual has tolerated acute cholecystitis, and

cholecystectomy is contemplated. In patient (7) in replacing the first pacemaker the lead was damaged and the entire unit had to be removed and under fluoroscopy replaced with a new electrode. Skin erosion in patient (8) resulted in the electrode and generator having to be moved to the other side of the chest. Patient (9) reverted to normal sinus rhythm, and the lead and generator were removed without incident. A large femoral hernia repair was carried out on patient (10) two weeks after pacing began. Patient (11) was the only fatality. One year after initial implantation the generator failed resulting in the return of her Stokes-Adams attacks. One week after replacement with a demand unit she developed intractable heart failure and expired. Permission for autopsy was denied. Patient (13) continues to have mild congestive heart failure though she is pacing well and her failure is more amenable to drugs.

Result and Summary

Of the 15 patients one died, one is lost to followup and one patient is in mild congestive failure. The 12 remaining patients either are pacing well with complete control of their block, or have reverted to nor-

mal cardiac rhythm and had their pacemakers removed.

Although admittedly our experience with permanent pacemakers is limited we believe that our findings in this small number of patients can lead to a few assumptions; persons with complete A-V block, or symptomatic bradycardia, conditions normally carrying a 40-50 per cent mortality within 12 months of onset, can be offered in the community hospital a permanent cardiac pacemaker with a success rate comparable to that found in larger institutions and with a complication rate on greater than that of most reported series.^{3,4}

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Vasectomy—A Simple Procedure?

The Oregon Medical Association's Professional Consultation Committee does not agree. The Committee's concern relates to a rash of claims and lawsuits which recently have come to its attention. They advise that physicians doing this procedure carefully observe the following points:

- (1) secure a consent form signed by both man and wife; (2) insure informed consent by providing patient with explicit information regarding failures (such notification should be noted in writing on patient's chart); (3) specimens should be sent to a laboratory; (4) ejaculate with no sperm present should be obtained no less than 2-3 months following surgery before the patient is given assurance of sterility.

Criteria For Hospital IPPB Units

D. S. Tysinger, Jr., M. D.

Dothan, Alabama

1. Moisture: The purpose of the machine is to deliver moisture and medication.

A) it takes 0.044cc water to humidify one liter of air at body temperature.

B) All air is dry and should be humidified.

C) thus, 10L/min. will take 0.44 cc/min.
20L/min. " " 0.88 cc/min.
30L/min. " " 1.32 cc/min.
40L/min. " " 1.76 cc/min.
50L/min. " " 2.20 cc/min.

D) a machine should deliver water to humidify and at the same time deliver medication.

E) as nebulized water humidifies the air it concentrates the medication in it.

F) if medications become too concentrated, then topical tissue damage can occur though systemic improvement occurs.

G) in side arm nebulization only the driving volume of the nebulizer jet carries particles.

H) side arm flows range from 6-10 L/min.

I) a good atomizer will atomize at 6-10 L/min enough particles to be carried by 50L/min.

J) if this nebulizer is side arm, however, it will only saturate with particles that portion flowing through the nebulizer or 6-10L/min.

K) if total flow is 40L/min and only 10L/min carries particles, then 30L/min dilutes the particle volume flow and must be humidified.

L) this way only one-fourth as much can be carried due to the side arm particle saturation limitation. Nebulizer flow is the limiting factor.

M) if the nebulizer flows all the time,

then during the period of expiration when patient flow is out the exhalation valve, the nebulizer flow will also be out the exhalation valve.

N) this means uneven dosage delivery due to the varying amount put out the exhalation valve.

O) the average side arm nebulizing machine will put out 0.3cc to 0.8cc/min. running continuously, far below the moisture requirement of the patient. These machines run from 30-50L/min., nebulizer and venturi jet flow. This does not include venturi intrainment.

P) main stream nebulization runs only when the patient breathes in, nebulizes sufficient to give full particle delivery of all air through the nebulizer.

Q) the abundance of particles produced and since all machine primary and intrainment flow must pass through gives sufficient particles to saturate the flow through it, thus producing 100 per cent humidity with complete particle saturation at the nebulizer temperature.

R) main stream nebulizers will deliver 1.5cc/min or more during the inspiratory portion of breathing that they operate in due to all air being humidified and all air carrying particles.

S) the nebulizer must produce sufficient particle number and volume to 100% humidify at body temperature and leave a sufficiently large number of particles for adequate medication delivery to the peripheral.

T) minimum effective particle delivery volume is 100 particles/cc or 100,000 particles/L. Maximum effective particles for delivery is 1000 particles/cc or 1,000,000 particles/L. This is particle size 2-5 microns.

U) one cc of water will produce 10,000,000 particles of 2-5 micron size.

V) as an example, if the machine runs at 10L/min:

1) it takes $10 \times 0.044 = 0.44\text{cc}$ for humidity

2) it takes 0.1cc/L to produce particles or 1cc/10L

3) thus 1.4cc/min must be nebulized to supply maximum effective delivery

4) it takes 0.1cc to supply 100 particles/cc

W) at 50L/min:

1) it takes 2.2cc/min to humidify

2) 5cc for 1,000 particles/cc

3) thus 7.2cc would be needed for the high primary flow rate machine

4) for a minimum $2.2 + 0.5 = 2.7\text{cc}$ for 100 particles/cc

X) for this reason (though they ventilate) equipment that runs at a fixed primary flow of 20-50L/min with side arm nebulizers which puts out only 0.6-0.8cc/min cannot and will not completely humidify much less deliver effective medications.

*****IPPB machines, home or hospitals, should be main stream nebulized to deliver medications, moisture, and produce humidity. Side arm continuously or intermittent nebulizing equipment cannot adequately deliver.

II. AIR FLOW AND DELIVERY:

A) once particles are produced in sufficient numbers they must be delivered to the smaller tubules and peripheral of the lungs.

B) it is no problem to deliver air into and out of the lungs.

C) as long as sufficient pressure is produced, a volume of air can be made to

flow into and through the bronchial tubes.

D) volume flow in a given period of time is produced by a given pressure difference at the two ends of the tube.

E) to produce particle delivery is more difficult.

F) air with nebulized particles suspended is very unstable. Turbulence causes particle rain out.

G) delivery into the lungs is like delivering through the small end of a funnel toward the wide end.

H) here air delivery through the neck with high pressure will deliver volume to the funnel side.

I) this is done by agitating the air in the funnel neck as air is compressed in the process of pushing it through. This is called turbulence.

J) the funnel neck of the lungs is the trachea, primary, secondary, and tertiary bronchi.

K) if a patient is exchanging 600cc/breath twenty times per minute, his minute volume is 12,000cc/min. At 400cc this would be 8L/min.

L) as flow rates are doubled by machines that also add added pressure early in the inspiratory period turbulence occurs in the funnel neck (trachea, primary, secondary, tertiary bronchi.)

M) when particles are suspended and have to pass through this turbulent area, they rain out here because they are unstable in suspension.

N) a machine must be adjustable to a sufficiently low flow rate to deliver without producing turbulence particle rain out.

O) since resistance varies in this area and size and diameter in health and disease vary tremendously, then to deliver, the flow rate must be adjustable.

- P) most machines are designed as ventilators not as medication delivery equipment. Pressures can be controlled but venturi and nebulizer flow rates are fixed and at high levels to cope with maximum needs.
- Q) this is usually too high for the average sick patient. Thus, particle delivery in the upper airway with only ventilation below the funnel neck.
- R) as flow rates produce turbulence pressures go up. For the adult tube area (trachea, primary, secondary, tertiary bronchi) pressures exceeding 5-7cm-H₂O early in inspiration indicate turbulence too great to allow particle passage beyond the tube area.
- S) it is the pressure difference at the two ends of the tube. A rapid rise to 4-7 cm, then slow rise to 15-20cm cycling pressure indicates sufficiently low turbulence to delivery through.

*****In all equipment flow rates must be controllable separate from pressures so that individual patient flow rates can be matched and nebulized particulate material delivered to the depths needed clinically. High fixed flow rate equipment cannot deliver.

III. RATE OF PRESSURE BUILDUP:

- A) each machine has a positive pressure buildup area. This includes valve, tubing, nebulizer exhalation volume and mouthpiece.
- B) the primary flow rate into this volume area determines the rate of pressure buildup.
- C) high flow rates into small areas causes rapid buildup.
- D) machines that start with initial high pressure levels dropping to an average and building back up again cause greater mouth alveolar pressure differences and thus turbulence for the same flow rate.

- E) the first part of flow at the low flow rates and large buildup areas with slow pressure buildup cause more particles to be delivered beyond the lungs funnel neck and thus peripheral delivery.
- F) no obstructed lung area is ventilated effectively by any IPPB machine. Normal lung volumes are ventilated and then pressure buildup with machine recycling occurs.
- G) to ventilate obstructed areas then after the normal volume has been filled the machine should be held on allowing pressure and volume flow to fill and dilate obstructing lung tissues.
- H) if compression area is small and volume flow high and line pressure (50 PSI) being reflected throughout, rate of buildup is too rapid and pressures developed too rapidly to be effective with this obstructive technique.
- I) where machine compression area is large and flow rates controllable and low periods of pressure expansion of 30-40 seconds can be utilized with pressures reaching 30-35cmH₂O pressure only, obstructive technique works well.
- J) this same technique is the best way to protect and reverse alveolar atelectasis. This is the only adequate sighing technique.

*****Machines should be so constructed that when held on for a period of thirty seconds machine compression volume and flow rates are such that 40cmH₂O pressure will not be exceeded in thirty seconds time.

IV. COMPRESSION:

- A) home equipment runs on compressors and should be capable of operating efficiently at 50PSI and 30L/min. flow.
- B) in humid areas when air is compressed, moisture is rung out.

C) moisture in breathing equipment is the most common cause of gram negative infections.

D) to prevent infections moisture must be removed.

E) since this source is a source of in-

fection no matter where it is, the water trap should be easily removed and cleaned to reduce infections potential.

*****Pumps should be durable. Moisture produced by them should be easily removed by a water trap which is easily exccessible for cleaning.

Choosing Mechanical Breathing Equipment

D. S. Tysinger, Jr., M. D.

Dothan, Alabama

Flow through a tube is caused by the pressure difference at the two ends of the tube. The character of the flow through a tube is determined by the diameter of the tube, the length of the tube, and the rate at which the pressure difference is build up. The higher a pressure and a flow rate are for a given tube the more jerky and turbulent the flow is. A tube large enough will allow flow without turbulence. As resistance develops due to flow rate, more pressure is required. This resistance is turbulence and the pressure is required to cause the flow because of the turbulence. Pressure and the rate at which it builds up then is a measure of the turbulence being produced in the airway.

Between the mouth and quartinary bronchi in the lungs is the tube area which must be traversed to ventilate a patient. If sufficient pressure can be applied for a sufficient length of time, a sufficient volume will be delivered. To deliver more volume in a shorter time, it requires more pressure to produce a higher flow rate. This is the principle of ventilation.

It takes one pressure setting over one period of time to deliver one volume of air through one tube. It makes no difference what kind of machine is being used, bicycle pump, IPPB, or volume-cycled machines.

As tubes get smaller it takes more pressure to produce the same volume flow.

In medicating a patient with mechanical breathing equipment the aim is to deliver particulate material through the tube area to the periphery. Particulate material cannot be delivered through turbulent air. It rains out due to the turbulence. Since pressure is the indication of turbulence as pressure goes up so does turbulence and medication delivery goes down.

There are two forms of pressure buildup: (1) pressure buildup in the trachea, primary, secondary, and tertiary bronchi due to turbulence produced in this area is rapid due to high flow rates. Machines producing too high flow rates show almost immediate rises of the pressure needle to cycling pressure then cut off. (2) where lung filling occurs and where pressure buildup occurs secondary to lung filling, pressure rapidly rises to 4-6cmH₂O. (The pressure necessary to cause 6-12L/min. flow through the lungs tube area—trachea, primary, secondary, and tertiary bronchi,) then a slow rise to cycling pressure.

Any machine then that produces rapid pressure buildup may ventilate. This machine cannot be used effectively to medicate. Machines are used to ventilate and to medi-

cate. More machines will ventilate than will medicate. Pressure will ventilate, but blocks the ability to medicate. To medicate the machine must produce no more than a minimum (4-6cmH₂O) pressure in the early inspiratory cycle, further pressures to cycling pressures developing slowly.

There are on the market today essentially three types of clinical machines: (1) high fixed primary flow rate pressure cycled machines. (These machines usually have a high and low flow knob which does nothing more than back pressure and reduce the venturi intrainment flow. The secondary flow has nothing to do with pressure buildup or the delivery characteristics.) (2) the variable primary flow, pressure cycled machines. This machine is the true flow rate controlled machine. (3) The volume-cycled machine. Here, a fixed volume is delivered or compressed over whatever period of time the machine is set at. Flow rate is a function of the time over which the volume is delivered. Pressures are the result of compression at the machine and in moving the piston through the set volume as opposed to the rate of run off through the tube area of the lungs. (Trachea, primary, secondary, and tertiary bronchi.)

In the order of effectiveness it should be obvious that: *THE TYPE I* machine is the least effective. With this machine the proper flow rate cannot be set, pressure may not be

adequate and neither ventilation or medication satisfactorily done. *THE TYPE III* machine comes next with a fixed volume, and allows pressure to develop sufficiently to compress and/or deliver the volume. It lets the machine look for the pressure flow rate combination that will deliver. This machine usually develops such pressures however, and so rapidly that medication is not delivered beyond the lung tube area, the same as *TYPE I* equipment. This is the idiot machine. This is the machine that is most likely to work in the hands of someone who does not know how to use mechanical breathing equipment. *THE TYPE II* machine is the most effective if the operator understands the principles of pressure, flow rate, volume delivery. If he does not he should use the *TYPE II* machine (idiot machine) for the patient's sake.

It takes one pressure, and one flow rate over one period of time to ventilate a patient. Any machine that can be made to produce the pressure, and flow rate over the period of time, whether by accident as with the *TYPE III*, or on purpose as with *TYPE II*, will ventilate a patient. Medication is a more delicate subject.

The volume cycled machines rather than being a status symbol should be recognized as a simple machine for use by those who do not understand and are unable to operate more efficient equipment.

"Physician" Defined

The AMA House of Delegates has adopted the following definition of the word "physician" as proposed by the AMA Board of Trustees:

"A Physician is a person who, having been regularly admitted to a medical school duly recognized in the country in which it is located, has successfully completed the prescribed course of studies in medicine and has acquired the requisite qualifications to be legally licensed to practice medicine."

The Board reviewed proposed definitions by the World Health Organization, the Council of the World Medical Association, and others before recommending the one above as adequate to meet the need for such a definition in both national and international circles.

(Continued from Page 410)

Implied Consent Program (Alcohol Testing);

Emergency Medical Services;

Montgomery Gonorrhea Control Program;

Sickle Cell Anemia—Testing;

Mental Health Programs;

General Sanitation;

Air Pollution Control;

Solid Waste and Vector Control;

Public Water Supplies;

Water Improvement Commission;

Migratory Labor Housing;

Radiological Health;

Animal Borne Diseases—Mastitis;

General Food Service Protection (Inspection);

Health Facilities—Licensure and Certification;

Water and Sewage Works Operators—Certification;

Granny Midwives—Permits;

Hearing Aids—Licensure;

Comprehensive Health Planning Adm.;

EMS Technicians—Training;

Water and Sewage Works Operators—Training;

Medical Self-Help—Training;

Health Facilities Construction;

Developmental Disabilities—Construction;

Vital Records Registration;

Vital Records Services;

Vital Statistics;

Central Laboratory;

Branch Laboratories;

Public Health Nursing;

Primary Prevention (Health Education);

Pesticides Control;

Accident Prevention;

Early Childhood Development;

Local Health Administration;

Property Services;

Personnel Services;

Finance Services;

Data Processing and Reproduction;

I think that it is important to realize that the broad training of a physician makes him familiar with most of the topics for which the Board is responsible. A member of a Board who has no knowledge of a subject, even though he is a very conscientious person, can have no opinion or is very likely to have the wrong one. It is not practical to explain a problem to a Board member who does not have the background. I would not want to be on a board where half of the time I did not know what they were talking about.

Enough of the activities and functions, let's consider the constraints. This can be summed up in one word—MONEY. With adequate financing, the personnel problem—which is critical—would be tremendously helped. In Alabama FY 1970 the total contribution to County Health Departments in money only on a per capita basis was, I repeat, the total was \$3.02. Of this amount the local contribution was \$1.58, the Federal was \$1.11, and the state 33 cents. I repeat, the local contribution was \$1.58, the Federal \$1.11, and the state 33 cents. It certainly should be obvious that our greatest need is more adequate financing.

In conclusion, I again would like to express my appreciation for the opportunity of appearing before you. I hope that my talk will be of aid to you in your deliberations.

ALL IN HIS HEAD:

Watery Eyes

Nasal
Congestion

Sneezing

Runny Nose

**THE COLD
SYMPTOMS
THAT
MAKE HIM
MISERABLE**

ALL IN 'ORNADE:

Drying Agent
(isopropamide,
as the iodide—
2.5 mg.)

Decongestant
(phenylpropanol-
amine HCl—50 mg.)

Antihistamine
(chlorpheniramine
maleate—8 mg.)

**THE
INGREDIENTS
HE NEEDS
FOR PROLONGED
RELIEF**

Before prescribing, see complete prescribing information in SK&F literature or PDR.

Indications: Upper respiratory congestion and hypersecretion associated with: the common cold; acute and chronic sinusitis; vasomotor rhinitis; allergic rhinitis (hay fever, "rose fever," etc.).

Contraindications: Hypersensitivity to any component; concurrent MAO inhibitor therapy; severe hypertension; bronchial asthma; coronary artery disease; stenosing peptic ulcer; pyloroduodenal or bladder neck obstruction. Children under 6.

Warnings: Advise vehicle or machine operators of possible drowsiness. Warn patients of possible additive effects with alcohol and other CNS depressants.

Usage in Pregnancy: In pregnancy, nursing mothers and women who might bear children, weigh potential benefits against hazards. Inhibition of lactation may occur.

Effect on PBI Determination and I^{131} Uptake: Isopropamide iodide may alter PBI test results and will suppress I^{131} uptake. Substitute thyroid tests unaffected by exogenous iodides.

Precautions: Use cautiously in persons with cardiovascular disease, glaucoma, prostatic hypertrophy, hyperthyroidism.

Adverse Reactions: Drowsiness, excessive dryness of nose, throat or mouth; nervousness; or insomnia. Also, nausea, vomiting, epigastric distress, diarrhea, rash, dizziness, weakness, chest tightness, angina pain, abdominal pain, irritability, palpitation, headache, incoordination, tremor, dysuria, difficulty in urination, thrombocytopenia, leukopenia, convulsions, hypertension, hypotension, anorexia, constipation, visual disturbances, iodine toxicity (acne, parotitis).

Supplied: Bottles of 50 capsules.

SK&F Smith Kline & French Laboratories

Trademark

ORNADE® SPANSULE®

Each capsule contains 8 mg. of Teldrin® (brand of chlorpheniramine maleate); 50 mg. of phenylpropanolamine hydrochloride; 2.5 mg. of isopropamide, as the iodide.

brand of sustained release capsules

UNCOMMON RELIEF FOR COLD SYMPTOMS

If you've seen one, have you really seen them all?

The following patient profiles represent typical clinical situations, but do not necessarily represent actual cases.

Age 22, previously normal menses with occasional menorrhagia. Now on a sequential O.C. for four months. Complains of heavy flow, occasional intracyclic bleeding, edema, tender swollen breasts. Indicates estrogen excess.

1st choice: Switch to a combination 50-mcg.-estrogen O.C. (such as **Demulen**®).

Age 19, small breasts, minor hirsutism, oily hair and skin. History of metrorrhagia, skipped or scanty menses. New user.

Indicates androgenic excess or estrogen deficiency (fertility is suspect).

1st choice: An estrogen-dominant O.C. (such as **Enovid-E**®).

Age 25, average frame, poor complexion. No problem with menses, normal para 1. On a low-estrogen/high-progestogen O.C. for two years. Now complains of scanty flow, decreased libido, depression.

Indicates probable buildup of progestogen-related side effects.

1st choice: Switch to a center-spectrum O.C. with more estrogen, less progestational activity (such as **Ovulen**®).

Age 21, short, mammosc, with normal menses, some acne. Was put on premenstrual regimen of 50-mcg.-estrogen/moderate-progestogen O.C. for two months. Now has increased acne.

Indicates metabolic production of androgen or relative estrogen deficiency.

1st choice: Switch to a 100-mcg.-estrogen combination (such as **Enovid-E**® or a sequential).



Unmasked, physiologically and anatomically, they're not all the same. A basic difference lies in their hormone profiles. One may secrete too much estrogen, another not enough...or perhaps too much androgen; the vast majority would fit somewhere into the broad center spectrum.

Although the profiles described below may not be completely predictive, in optimal O.C. selection, the estrogen-progestogen activity ratio should be carefully matched to the patient profile. Searle offers you O.C.s in a range not only suitable for your patients in the balanced center spectrum, but also adaptable to the patient with another type of hormone profile.

Oral contraceptives are complex medications. Among the commonly reported adverse reactions are: intracycle bleeding, fluid retention, tender or swollen breasts, exacerbation of acne condition, changes in libido, amenorrhea while on medication and upon discontinuance, nausea, leg cramps, headaches, weight gain. Therefore, after reference to the prescribing information, oral contraceptives should be prescribed with care.

*Note: In some patients any level of exogenous estrogen or progestogen may produce symptoms of excess hormone activity.

Age 25, tall, slender, athletic, with flat chest. On a progestogen-dominant 50-mcg.-estrogen O.C. Has recurrent trichomoniasis and Monilia.

Indicates estrogen deficiency and excess of progestogen in current O.C.

1st choice: Switch to a combination pill with 100 mcg estrogen and less progestational activity (such as **Enovid-E**[®] or **Ovulen**[®] or a sequential).

Age 23, "Miss America" figure, previously normal menses, healthy skin and hair. On a 50-mcg.-estrogen pill for four months. Complains of intracyclic bleeding.

Indicates probable need for more estrogen.

1st choice: Switch to a center-spectrum O.C. with more estrogen and moderate progestogen dominance (such as **Ovulen**[®]).

Age 21, college senior, average build. On highly progestogen-dominant/low-dose-estrogen O.C. for six months. Now complains of amenorrhea, between-cycle headaches, weight gain.

Indicates probable progestogen excess.

1st choice: Switch to a center-spectrum pill (such as **Ovulen**[®]).

Age 27, slightly overweight, multiparous. Nausea with all three pregnancies and with a sequential O.C. three years ago. Has premenstrual fluid retention and leg cramps.

Indicates probable excess of estrogen.

1st choice: A 50-mcg.-estrogen/progestogen-dominant pill (such as **Demulen**[®]).

Ovulen[®] a balanced center-spectrum O.C. for most

Each white tablet contains ethynodiol diacetate 1 mg./mestranol 0.1 mg.

Demulen[®] a moderately progestogen-dominant O.C. for many

Each white tablet contains ethynodiol diacetate 1 mg./ethinyl estradiol 50 mcg.

Each pink tablet in Ovulen-28[®] and Demulen[®]-28 is a placebo, containing no active ingredients. Both Ovulen and Demulen are available in 21- and 28-pill schedules.

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Enovid-E[®] a moderately estrogen-dominant O.C. for some

Each tablet contains norethynodrel 2.5 mg./mestranol 0.1 mg.

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Where "The Pill" Began

For a brief summary of prescribing information, please see next page.

a family of O.C. products to help you match
the right pill to the right patient

Ovulen®

Each white tablet contains
ethynodiol diacetate 1 mg./mestranol 0.1 mg.

Demulen®

Each white tablet contains
ethynodiol diacetate 1 mg./ethinyl estradiol 50 mcg.

Each pink tablet in Ovulen-28® and Demulen®-28 is a placebo, containing no active ingredients.

Actions—Ovulen and Demulen act to prevent ovulation by inhibiting the output of gonadotropins from the pituitary gland. Ovulen and Demulen depress the output of both the follicle-stimulating hormone (FSH) and the luteinizing hormone (LH).

Special note—Oral contraceptives have been marketed in the United States since 1960. Reported pregnancy rates vary from product to product. The effectiveness of the sequential products appears to be somewhat lower than that of the combination products. Both types provide almost completely effective contraception.

An increased risk of thromboembolic disease associated with the use of hormonal contraceptives has now been shown in studies conducted in both Great Britain and the United States. Other risks, such as those of elevated blood pressure, liver disease and reduced tolerance to carbohydrates, have not been quantitated with precision.

Long-term administration of both natural and synthetic estrogens in subprimate animal species in multiples of the human dose increases the frequency of some animal carcinomas. These data cannot be transposed directly to man. The possible carcinogenicity due to the estrogens can be neither affirmed nor refuted at this time. Close clinical surveillance of all women taking oral contraceptives must be continued.

Indication—Ovulen and Demulen are indicated for oral contraception.

Contraindications—Patients with thrombophlebitis, thromboembolic disorders, cerebral apoplexy or a past history of these conditions, markedly impaired liver function, known or suspected carcinoma of the breast, known or suspected estrogen-dependent neoplasia and undiagnosed abnormal genital bleeding.

Warnings—The physician should be alert to the earliest manifestations of thrombotic disorders (thrombophlebitis, cerebrovascular disorders, pulmonary embolism and retinal thrombosis). Should any of these occur or be suspected the drug should be discontinued immediately.

Retrospective studies of morbidity and mortality conducted in Great Britain and studies of morbidity in the United States have shown a statistically significant association between thrombophlebitis, pulmonary embolism, and cerebral thrombosis and embolism and the use of oral contraceptives. There have been three principal studies in Britain^{1,2} leading to this conclusion, and one³ in this country. The estimate of the relative risk of thromboembolism in the study by Vessey and Doll³ was about sevenfold, while Sartwell and associates⁴ in the United States found a relative risk of 4.4, meaning that the users are several times as likely to undergo thromboembolic disease without evident cause as nonusers. The American study also indicated that the risk did not persist after discontinuation of administration and that it was not enhanced by long-continued administration. The American study was not designed to evaluate a difference between products. However, the study suggested that there might be an increased risk of thromboembolic disease in users of sequential products. This risk cannot be quantitated, and further studies to confirm this finding are desirable.

Discontinue medication pending examination if there is sudden partial or complete loss of vision, or if there is a sudden onset of proptosis, diplopia or migraine. If examination reveals papilledema or retinal vascular lesions medication should be withdrawn.

Since the safety of Ovulen and Demulen in pregnancy has not been demonstrated, it is recommended that for any patient who has missed two consecutive periods pregnancy should be ruled out before continuing the contraceptive regimen. If the patient has not adhered to the prescribed schedule the possibility of pregnancy should be considered at the time of the first missed period.

A small fraction of the hormonal agents in oral contraceptives has been identified in the milk of mothers receiving these drugs. The long-range effect to the nursing infant cannot be determined at this time.

Precautions—The pretreatment and periodic physical examinations should include special reference to the breasts and pelvic organs, including a Papanicolaou smear since estrogens have been known to produce tumors, some of them malignant, in five species of subprimate animals. Endocrine and possibly liver function tests may be affected by treatment with Ovulen or Demulen. Therefore, if such tests are abnormal in a patient taking Ovulen or Demulen, it is recommended that they be repeated after the drug has been withdrawn for two months. Under the influence of progestogen-estrogen preparations pre-existing uterine fibromyomas may increase in size. Because these agents may cause some degree of fluid retention, conditions which might be influenced by this factor, such as epilepsy, migraine, asthma, cardiac or renal dysfunction, require careful observation. In breakthrough bleeding, and in all cases of irregular bleeding per vaginam, nonfunctional causes should be borne in mind. In undiagnosed bleeding per vaginam adequate diagnostic measures are indicated. Patients with a history of psychic depression should be carefully observed and

the drug discontinued if the depression recurs to a serious degree. Any possible influence of prolonged Ovulen or Demulen therapy on pituitary, ovarian, adrenal, hepatic or uterine function awaits further study. A decrease in glucose tolerance has been observed in a significant percentage of patients on oral contraceptives. The mechanism of this decrease is obscure. For this reason, diabetic patients should be carefully observed while receiving Ovulen or Demulen therapy. The age of the patient constitutes no absolute limiting factor, although treatment with Ovulen or Demulen may mask the onset of the climacteric. The pathologist should be advised of Ovulen or Demulen therapy when relevant specimens are submitted. Susceptible women may experience an increase in blood pressure following administration of contraceptive steroids.

Adverse reactions observed in patients receiving oral contraceptives—A statistically significant association has been demonstrated between use of oral contraceptives and the following serious adverse reactions: thrombophlebitis, pulmonary embolism and cerebral thrombosis.

Although available evidence is suggestive of an association, such a relationship has been neither confirmed nor refuted for the following serious adverse reactions: neuro-ocular lesions, e.g., retinal thrombosis and optic neuritis.

The following adverse reactions are known to occur in patients receiving oral contraceptives: nausea, vomiting, gastrointestinal symptoms (such as abdominal cramps and bloating), breakthrough bleeding, spotting, change in menstrual flow, amenorrhea during and after treatment, edema, chloasma or melasma, breast changes (tenderness, enlargement and secretion), change in weight (increase or decrease), changes in cervical erosion and cervical secretions, suppression of lactation when given immediately post partum, cholestatic jaundice, migraine, rash (allergic), rise in blood pressure in susceptible individuals and mental depression.

Although the following adverse reactions have been reported in users of oral contraceptives, an association has been neither confirmed nor refuted: anovulation post treatment, premenstrual-like syndrome, changes in libido, changes in appetite, cystitis-like syndrome, headache, nervousness, dizziness, fatigue, backache, hirsutism, loss of scalp hair, erythema multiforme, erythema nodosum, hemorrhagic eruption and itching.

The following laboratory results may be altered by the use of oral contraceptives: hepatic function: increased sulfobromophthalein retention and other tests; coagulation tests: increase in prothrombin, Factors VII, VIII, IX and X; thyroid function: increase in PBI and butanol extractable protein bound iodine, and decrease in T₃ uptake values; metyrapone test and pregnanediol determination.

References: 1. Royal College of General Practitioners. Oral Contraception and Thrombo-Embolic Disease, J. Coll. Gen. Pract. 13:267-279 (May) 1967. 2. Inman, W. H. W., and Vessey, M. P. Investigation of Deaths from Pulmonary Coronary, and Cerebral Thrombosis and Embolism in Women of Child-Bearing Age, Brit. Med. J. 2:193-199 (April 27) 1968. 3. Vessey, M. P., and Doll, R. Investigation of Relation Between Use of Oral Contraceptives and Thromboembolic Disease. A Further Report, Brit. Med. J. 2:651-657 (June 14) 1969. 4. Sartwell, P. E., Masi, A. T., Arthes, F. G., Greene, G. R., and Smith, H. E. Thromboembolism and Oral Contraceptives. An Epidemiologic Case-Control Study, Amer. J. Epidemiol. 90:365-380 (Nov) 1969.

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Enovid-E®

norethynodrel 25 mg./mestranol 0.1 mg.

Actions—Enovid-E acts to prevent ovulation by inhibiting the output of gonadotropins from the pituitary gland. Enovid-E depresses the output of both the follicle-stimulating hormone (FSH) and the luteinizing hormone (LH).

Indication—Enovid-E is indicated for oral contraception.

The Special Note, Contraindications, Warnings, Precautions and Adverse Reactions listed above for Ovulen and Demulen are applicable to Enovid-E and should be observed when prescribing Enovid-E.

Enovid-E®

brand of norethynodrel with mestranol

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Where "The Pill" Began



What Is The Alabama Regional Medical Program And Its Practical Application To Rural Health

by

John M. Packard, M. D.
Birmingham, Alabama

The Alabama Regional Medical Program is an organization started five years ago, soon after the "Heart Disease, Cancer and Stroke" act was passed. We are another one of those federally funded programs, but with a difference: we don't control—we support and facilitate. We're the first real test of revenue sharing: the federal government deposits a lump sum to our account at the Medical Center and these funds are distributed by an advisory and policy setting group of 62 members from all parts of the state. Approximately one-fifth of the Regional Advisory Group are practicing physicians, another fifth are health educators, two-fifths are other providers of health care including dentists, nurses, pharmacists, hospital administrators, Veterans Administration and State Health Department officials, while the remaining one-fifth are knowl-

edgeable members of the public including a county judge, a small town mayor, a county commissioner and an insurance man.

We are a small organization of less than a dozen professional and technical personnel based in Birmingham plus a coordinator in each of the six functioning areawide health planning agencies throughout the state.

The amount of money we have had to spend is likewise relatively small: during our first five years it totalled just over three million dollars, almost exactly twenty cents per citizen per year. We are not allowed to pay for construction of new facilities, nor to pay for the care of individual patients. Likewise, the Regional Advisory Group has discouraged large purchases of equipment. How are decisions made about the use of staff time or dollars to get the greatest improvement in health for the largest number of persons?

First, like the Alabama Rural Health Council, we have used a multidisciplinary approach to problem solving and decision

Dr. Packard is Director, Alabama Regional Medical Program.

Presented at the Fourth Alabama Rural Health Conference, Montgomery, Alabama, August 23, 1972.

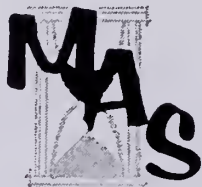
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The only question to be settled now is:
Are women persons?

—Susan Brownell Anthony (1892)

Watch out w'en youer gettin' all you want.
Fattenin' hogs ain't in luck.

—Joel Chandler Harris

ALABAMA REGIONAL MEDICAL PROGRAM

making. The program staff, regional and local advisory groups, committees and the meetings we have sponsored each involve people representing many different professions, health and educational institutions, governmental and voluntary health agencies and members of the public. Together they identify mutual problems and their possible solutions.

Secondly, we support studies and activities which are necessary for collecting the data necessary for adequate planning. To this end we have assisted in the development of areawide Comprehensive Health Planning agencies throughout the state and have provided support for the Alabama Health Study Commission.

On the basis of this information the Regional Advisory Group has set certain objectives and arranged them in priority order. These objectives are: (1) improvement in the delivery of health care, especially emergency medical care and care in rural areas; (2) manpower development; and (3) continuing education. All requests for staff or financial assistance are considered in the light of these priorities.

It is important to realize that lack of health care is but one part of the complex problems facing rural Alabama. Furthermore, health itself is more dependent on good nutrition, adequate housing, a clean environment and self-control than on medical care. Therefore, even considerable improvement in the availability of medical care will not, by itself, improve rural health.

Unfortunately, certain factors are working to cause an increase in the amount of medical care required in rural areas. One of these is the departure of young and middle-aged adults because of lack of jobs. This leaves the very young and the over 65 age groups, each of which requires more medical attention than the 20-64 year old group. Another factor is poverty. Poor people have more illness and because of lack of transportation, money and information, are less able to obtain medical care. Poverty also

acts to reduce the local tax base, resulting in less support for environmental and public health services, and likewise less support for the school system, putting the graduates at a disadvantage when competing for admission to college. This further reduces the chance for rural residents to enter the health professions and then return home to practice.

The obvious and most pressing end result is a lack of physician services. The number of general practitioners who serve rural Alabama is diminishing by death, retirement, movement to larger towns, or return to a university for further training. They are not being replaced by younger men for numerous reasons; among others, a nationwide shortage of M. D.'s in relation to demand; the increasing complexity of medical science and technology which requires prolonged training in large cities and has markedly reduced the numbers of physicians training to be family practitioners or "primary care" physicians; professional isolation; long hours, large patient load and often inadequate facilities; social, cultural and domestic deterrents often voiced by wives; and the small number of physicians who are natives of rural Alabama.

Closely related to lack of physicians is the lack of other health manpower which is needed to provide high quality medical care. Most of these are trained in larger cities and few return to rural areas.

The lack of these health providers and of other professional and business men reduced the possibility of adequate long range planning by neighboring communities, such as the development of coordinated programs for local recruiting and training of health manpower and for persuading those trained in the larger cities to return home.

The lack of health manpower has also resulted in under-utilized hospitals, which cannot economically support the more specialized services, including intensive care units, inhalation therapy, or physical therapy, which are available in larger hospitals.

(Continued on Page 433)

Ampicillin

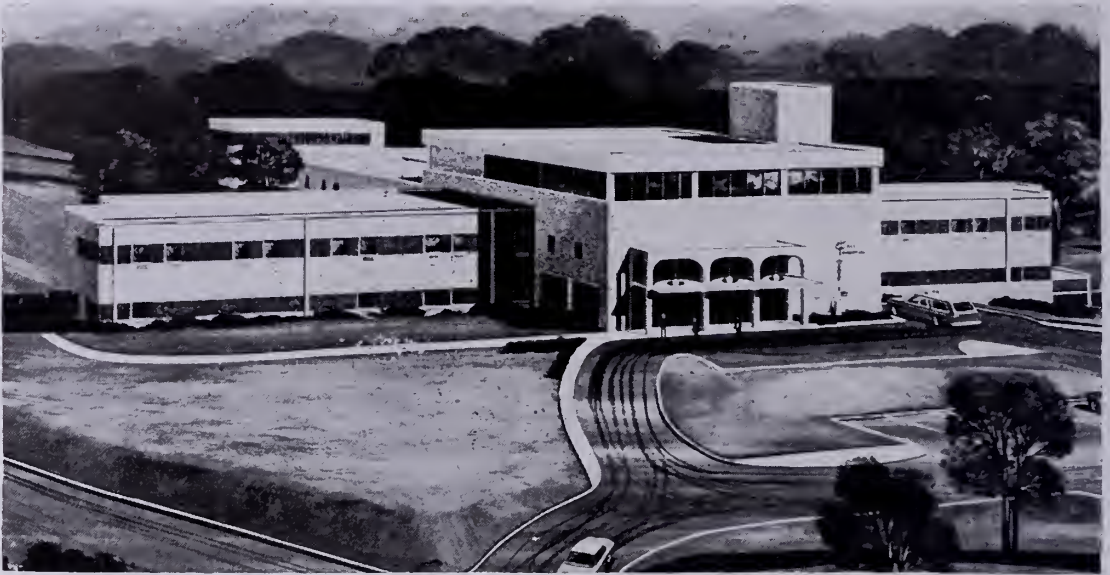
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ampicillin, for oral suspension equivalent
to 125 mg./5 cc. and 250 mg./5 cc. ampicillin.

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This 113-bed non-governmental psychiatric hospital provides modern facilities for diagnosis and treatment of patients with all degrees of illness, including those who show severely disturbed behavior. Alcoholic and drug abuse patients are also accepted.

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(Continued from Page 431)

A final problem, not limited to rural areas, is the fragmentation of responsibility for providing and financing health services. As an example, over 100 governmental agencies, from city to federal level, have some responsibility for various components of emergency medical service. Another example is the patient receiving some medical care from private physicians, some from public health clinics and some from hospitals, with little or no coordination between the providers.

What specifically is the Alabama Regional Medical Program doing to help solve these problems?

First, we are encouraging local planning efforts, such as the formation of Comprehensive Health Planning Agencies for multi-county districts and the development of local councils designed to improve emergency medical services.

A good example is our support of the Co-ordinated Services Project in South Central Alabama and Northwest Florida in which 17 hospitals have banded together for joint purchasing of supplies, services and in-service and on-the-job training programs. We are also helping in the development of statewide plans for improving emergency medical service, and for the treatment of patients with severe kidney disease, acutely ill infants and patients with cancer requiring X-ray treatment, hoping to develop regional centers in the larger cities of the state while avoiding the duplication of costly facilities.

Secondly, ARMP is supporting several efforts to recruit health science students from rural areas, and to provide some of their training away from Birmingham. In particular we have cooperated with the Appalachian Regional Commission to provide jobs in rural areas during vacation periods for many different varieties of health students. The students not only provide additional needed manpower in these rural counties, but have a chance to see many of the benefits of practicing in these localities after their training is completed.

We also helped to develop the Regional

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Technical Institute, part of the University of Alabama in Birmingham, which has a co-operative arrangement with the 18 state junior colleges to provide clinical training in Birmingham for many allied health courses with most of the classroom work being conducted in the local junior college. It is hoped that this will reduce exposure to the large cities and will strengthen ties with the local communities as well as avoiding the duplication of costly clinical faculty in each junior college.

We have provided consultation to about two dozen of the colleges and universities of the state who are planning to develop training courses for health personnel.

Because it has been shown that many physicians tend to settle in the areas where they have received their hospital training after graduation from medical school, we have supported efforts to develop internship and residency programs in Montgomery, Tuscaloosa and Huntsville. A recent check showed

that more than 70 per cent of the interns and residents trained in Pensacola have settled within one hundred miles of Pensacola. This is indeed an effort worth pursuing.

Thirdly, because it seems unlikely that new physicians will move into rural areas unless something is done to ease the work load, we have provided support to another Appalachian Regional Commission project in Lawrence County which provides teams of allied health workers to assist the physicians in their job. Hopefully this will make their work load more manageable while giving care to more patients in less time, and will make such a practice more attractive to young graduates. To this end the Alabama Regional Medical Program has been active in helping develop programs for new types of health manpower, such as the surgeon's assistant, physician's assistant, and nutrition aides. One innovative program appears to have been highly successful: that of giving

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qualified licensed practical nurses (of which there is an abundant supply in Alabama) an associate degree in nursing after only one year of additional training. This should somewhat ease the shortage of registered nurses in the Northwest part of the state.

Recently the National Health Service Corps has been assigning physicians for a two-year period of duty to areas short of physicians in place of military service. ARMP has assisted communities in applying for these physicians, and thus far four physicians have arrived in Alabama as part of this program, while an additional six are expected. We hope to do many things to make their stay in Alabama so pleasant and rewarding that they will wish to remain after their two years obligated service is up.

Finally, one of our most successful ventures, which has received national recognition and which tends to reduce the sense of isolation felt by doctors and other health personnel in rural areas, has been our support of the Medical Information Service by Telephone, known as MIST. During its three years of existence more than 32,000 phone calls have been made to or from specialists in the Medical Center, all of whom have donated their time without charge to answer the problems facing the physicians and nurses practicing in Alabama.

No one group of health professionals has the responsibility nor the ability to improve rural health in Alabama. Nor can the health of rural citizens be improved without improvement in the health of all Alabama citizens. The Alabama Regional Medical Program is unique in being governed by representatives of many different professions, organizations, and institutions. It has no vested interest to protect, other than the health of our citizens. It works with and through other groups to achieve this end by supporting continuing education, the development of more health manpower and improvements in the delivery of health care. We accept with pleasure the invitation to become a member of the Rural Health Council of Alabama, and look forward to assisting you in the large task that lies ahead.

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named it,
put it in your hands.

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Mediphone, the Nationwide Physicians' Consultation System, has been established by the American Society of Contemporary Medicine and Surgery, under the leadership of Dr. Michael DeBakey, President, and Dr. Morris Fishbein, Chairman. The Society has extended its goal of continuing education by providing medical information and consultation to physicians by telephone. Now any physician, regardless of his geographic location, can call (312) 782-7888 and receive expert advice from one of 400 outstanding specialists in all fields of medicine and surgery. This service is available to all physicians and does not require membership or pre-registration. It is hoped that physicians will use this valuable service when faced with perplexing medical problems. The charge for a five minute conference with a prominent specialist is \$15.00.

A Fascinating Phobia

Human attitudes toward reptiles range from paralyzing fear to unbridled fascination, and individuals face the snake world with everything but indifference.

"The Fascination of Reptiles" is the title of an exquisite book on the subject just published by Hill & Wang, a division of Farrar, Straus and Giroux of New York. Authored by an Englishman, Maurice Richardson, it is a completely absorbing book, well written, loaded with facts and fiction, and richly illustrated in full color.

An added interest to medicine in this \$10 book is its discussion of venoms, their identification and effect.

Americans are so enamoured of equality that they prefer equal slavery to unequal freedom.

—de Tocqueville

Rondomycin[®]

(methacycline HCl)

CONTRAINDICATIONS: Hypersensitivity to any of the tetracyclines.

WARNINGS: Tetracycline usage during tooth development (last half of pregnancy to eight years) may cause permanent tooth discoloration (yellow-gray-brown), which is more common during long-term use but has occurred after repeated short-term courses. Enamel hypoplasia has also been reported. **Tetracyclines should not be used in this age group unless other drugs are not likely to be effective or are contraindicated.**

Usage in pregnancy. (See above **WARNINGS** about use during tooth development.) Animal studies indicate that tetracyclines cross the placenta and can be toxic to the developing fetus (often related to retardation of skeletal development). Embryotoxicity has also been noted in animals treated early in pregnancy.

Usage in newborns, infants, and children. (See above **WARNINGS** about use during tooth development.)

All tetracyclines form a stable calcium complex in any bone-forming tissue. A decrease in fibula growth rate observed in premature given oral tetracycline 25 mg/kg every 6 hours was reversible when drug was discontinued.

Tetracyclines are present in milk of lactating women taking tetracyclines.

To avoid excess systemic accumulation and liver toxicity in patients with impaired renal function, reduce usual total dosage and, if therapy is prolonged, consider serum level determinations of drug. The antianabolic action of tetracyclines may increase BUN. While not a problem in normal renal function, in patients with significantly impaired function, higher tetracycline serum levels may lead to azotemia, hyperphosphatemia, and acidosis.

Photosensitivity manifested by exaggerated sunburn reaction has occurred with tetracyclines. Patients apt to be exposed to direct sunlight or ultraviolet light should be so advised, and treatment should be discontinued at first evidence of skin erythema. **PRECAUTIONS:** If superinfection occurs due to overgrowth of nonsusceptible organisms, including fungi, discontinue antibiotic and start appropriate therapy.

In venereal diseases, when coexistent syphilis is suspected, perform darkfield examination before therapy, and serologically test for syphilis monthly for at least four months.

Tetracyclines have been shown to depress plasma prothrombin activity; patients on anticoagulant therapy may require downward adjustment of their anticoagulant dosage. In long-term therapy, perform periodic organ system evaluations (including blood, renal, hepatic).

Treat all Group A beta-hemolytic streptococcal infections for at least 10 days.

Since bacteriostatic drugs may interfere with the bactericidal action of penicillin, avoid giving tetracycline with penicillin.

ADVERSE REACTIONS: **Gastrointestinal** (oral and parenteral forms): anorexia, nausea, vomiting, diarrhea, glossitis, dysphagia, enterocolitis inflammatory lesions (with monilial overgrowth) in the anogenital region.

Skin: maculopapular and erythematous rashes; exfoliative dermatitis (uncommon). Photosensitivity is discussed above (See **WARNINGS**).

Renal toxicity: rise in BUN, apparently dose related (See **WARNINGS**).

Hypersensitivity: urticaria, angioneurotic edema, anaphylaxis, anaphylactoid purpura, pericarditis, exacerbation of systemic lupus erythematosus.

Bulging fontanels, reported in young infants after full therapeutic dosage, have disappeared rapidly when drug was discontinued.

Blood: hemolytic anemia, thrombocytopenia, neutropenia, eosinophilia.

Over prolonged periods, tetracyclines have been reported to produce brown-black microscopic discoloration of thyroid glands; no abnormalities of thyroid function studies are known to occur.

USUAL DOSAGE: Adults—600 mg daily, divided into two or four equally spaced doses. More severe infections: an initial dose of 300 mg followed by 150 mg every six hours or 300 mg every 12 hours. **Gonorrhea:** In uncomplicated gonorrhea, when penicillin is contraindicated, 'Rondomycin' (methacycline HCl) may be used for treating both males and females in the following clinical dosage schedule: 900 mg initially, followed by 300 mg q.i.d. for a total of 5.4 grams.

For treatment of syphilis, when penicillin is contraindicated, a total of 18 to 24 grams of 'Rondomycin' (methacycline HCl) in equally divided doses over a period of 10-15 days should be given. Close follow-up, including laboratory tests, is recommended.

Eaton Agent pneumonia. 900 mg daily for six days.

Children—3 to 6 mg/lb/day divided into two to four equally spaced doses.

Therapy should be continued for at least 24-48 hours after symptoms and fever have subsided.

Concomitant therapy: Antacids containing aluminum, calcium or magnesium impair absorption and are contraindicated. Food and some dairy products also interfere. Give drug one hour before or two hours after meals. Pediatric oral dosage forms should not be given with milk formulas and should be given at least one hour prior to feeding.

In patients with renal impairment (see **WARNINGS**), total dosage should be decreased by reducing recommended individual doses or by extending time intervals between doses.

In streptococcal infections, a therapeutic dose should be given for at least 10 days.

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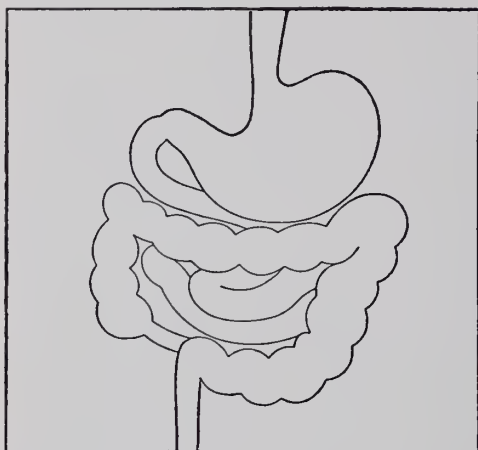
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Contraindications: Anticholinergics should not be used in patients with glaucoma, known prostatic hypertrophy, or pyloric obstruction. Urinary retention may indicate the presence of prostatic hypertrophy. If it occurs, the dose should be reduced or the drug withdrawn. Also contraindicated in patients with known hypersensitivity to one of the components.
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around the state

Vital Statistics

NEW MEMBERS

Franklin County

MacQuigg, David Ellison, b 15, mc Ohio State U., 43, recip. Ohio 72, P. O. Drawer 429, Red Bay, Alabama 35582. GP.

Jefferson County

Anderson, Richard Dawson, b 35, mc Columbia U., 60, recip. NBME 72, 800 Montclair Rd., Birmingham, Alabama 35213. R.

Breaux, Charles Warren, b 31, mc Louisiana U., 64, recip. La. 72, 1515 6th Ave., S., Birmingham, Alabama 35233. S.

Breinig, John Boyers, b 40, mc Vanderbilt U., 66, recip. NBME 71, 127 Main St., Mountain Brook, Alabama 35213. C.

Cosby, Robert Milton, b 45, mc U. Ala. 71, recip. NBME 72, 1130 Ford Ave., Tarrant City, Birmingham, Alabama 35217. GP.

Crommelin, Henry, Jr., b 35, mc U. Ala. 65, sb 66, 1615 25th St., N., Birmingham, Alabama 35234. ObG.

Davidson, Julius David, b 37, mc U. Ala. 62, sb 63, 1720 8th Ave., S., Birmingham, Alabama 35205. Oph.

Freeman, William James, b 41, mc Johns Hopkins U., 67, recip. NBME 72, 1147 H. Green Springs Ave., S., Birmingham, Alabama 35205. OALR.

Goel, Yogendra Singh, b 35, mc King George's Med. College, Lucknow, India 59, recip. Illinois 70, 700 19th St., S., Birmingham, Alabama 35233. Nuclear Medicine

Lamkin, Thomas Griffin, b 40, mc U. Ala. 66, recip. NBME 67, 1901 14th Ave., So., Birmingham, Alabama 35205. Oph.

Meyer, Richard Deer, b 45, mc U. Ala. 71, recip. NBME 72, 1615 25th St., N., Birmingham, Alabama 35234. Or.

Moorefield, Charles William, b 25, mc Virginia 48, recip. Virginia 72, 7000 5th Ave., S., Birmingham, Alabama 35212. P.

Nicholson, James Lee, b 32, mc U. Louisville 58, recip. Kentucky 62, 1032 18th St., S., Birmingham, Alabama 35205. I.

Rains, Darrel Estle, b 39, Mc U. Kentucky 65, recip. Kentucky 69, 924 18th St., S., Birmingham, Alabama 35205. Oph.

Wood, Ernest Cubbage, b 42, mc U. Ala., 67, recip. NBME 69, 31 Church St., Crestline, Birmingham, Alabama 35213. Pd.

Madison County

Lampert, Ralph Jacques, b 39, mc Louisiana U., 66, recip. La. 72, 101 Sivley Rd., Huntsville, Alabama 35801. Path.

Maccubbin, Don Aubrey, b 32, mc Johns Hopkins U., 57, recip. Maryland, 72, 401 Lowell Dr., Huntsville, Alabama 35801. NS.

Montgomery County

Anderson, James Noble, b 39, mc Miss. 65, recip. Miss. 72, 2119 E. South Blvd., Montgomery, Alabama 36111. ThS.

Wilson, Barry Lewis, b 42, mc U. Ala. 67, recip. NBME 68, 2119 E. South, Blvd., Montgomery, Alabama 36111. ObG.

Russell County

Garnett, Robert Louis, b 39, mc State U. of New York 66, recip. NBME 70, P. O. Box 1203, Phenix City, Alabama 36867. R.

MEMBERS DECEASED

Baldwin County

Adams, Jerald Earl, Jr., Robertsedale, Alabama, Deceased 8/72.

Etowah County

Bass, John Burrell, Gadsden, Alabama, Deceased 9/16/72.

Houston County

Cummins, Manley Lafayette, Jr., Ashford, Alabama, Deceased 7/13/72.

CHANGES OF ADDRESS

Colbert County

Carmichael, Archie H., Jr., present Muscle Shoals, Alabama to 505 N. Columbia St., Sheffield, Alabama 35660.

Weber, Alvin J., III, present Muscle Shoals, Alabama to 505 North Columbia St., Sheffield, Alabama 35660.

Williams, Roy W., present Muscle Shoals, Alabama to 505 N. Columbia St., Sheffield, Alabama 35660.

Covington County

Johnson, J. Wayne, present Andalusia to P. O. Box 940, Andalusia, Alabama 36420.

Escambia County

Perry, George T., present Brewton to P. O. Box 367, Brewton, Alabama 36426.

Jefferson County

Bean, Stuart K., present Birmingham to 7916-2nd Ave., S., Birmingham, Alabama 35206.

Bowen, Robert K., Jr., present Robins AFB, Georgia to 1111 S. Raleigh Ave., Sheffield, Alabama 35660.

Burnett, James M., present Birmingham to 9228 Gadsden Highway, Birmingham, Alabama 35206.

Collins, Douglas, present Birmingham to 9228 Gadsden Highway, Roebuck, Birmingham, Alabama 35206.

Darnell, Henry L., Jr., present Birmingham to 9228 Gadsden Highway, Birmingham, Alabama 35206.

Daugherty, M. Preston, Jr., present Birmingham to 1653 Springhill Ave., Mobile, Alabama 36604.

Froelicher, Victor F., Jr., present Birmingham to School of Aerospace Med., USAF—(AFSC)—Dept. NGI, Cardiology, Brooks AFB, Texas 78235.

Levy, David S., present Birmingham to 3348 Spring-Valley Ct., Birmingham, Alabama 35223.

White, Joe E., present Birmingham to 9228 Gadsden Highway, Birmingham, Alabama 35206.

Zarzaur, Joseph A., present Graysville, Alabama to 1201-11th Ave., South, Birmingham, Alabama 35205.

Madison County

Hereford, S. W., III, present Huntsville to 220 Sivley Rd., S. W., Huntsville, Alabama 35801.

Mobile County

Morton, Edwin D., present Mobile to 204 Three Office Park, Mobile, Alabama 36609.

Odom, Earle T., present Mobile to 1104 Joy Lane, Mobile, Alabama 36617.

Montgomery County

Chambless, William H., present Montgomery to 3980 Governors Dr., Montgomery, Alabama 35111.

MacGuire, Hugh C., present Montgomery to Queen Charlotte General Hospital, Queen Charlotte City, British Columbia, Canada.

Ward, A. Almon, present Montgomery to Rt. 1, Box 16-D, Pike Road, Alabama 36064.

Morgan County

Sidwell, Walter F., present Decatur to 1201-13th Ave., S. E., Decatur, Alabama 35601.

AROUND THE STATE

Pickens County

Sanford, Jon E., present Gordo, Alabama to McNease Clinic, Fayette, Alabama 35555.

Tuscaloosa County

Folsom, James C., present Tuscaloosa to 11630 Mediterranean Court, Reston, Virginia 22090.

Fowler, Inez, present Tuscaloosa to Suite 100, 921-3rd Ave., E., Tuscaloosa, Alabama 35401.

NEW TELEPHONE NUMBERS

Accinno, M. A., Jefferson	788-5679
Alford, C. A., Jr., Jefferson	934-2441
Allen, G. E., Jr., Jefferson	699-2491
Allen, T. H., Jefferson	933-6255
Anderson, J. N., Montgomery	288-0557
Anderson, R. D., Jefferson	591-4000
Arias, Manuel, Jefferson	967-2668
Baker, O. C., Jefferson	933-8936
Barcia, Alberto, Jefferson	934-5346
Barelare, Bruno, Jefferson	933-7321
Bargerion, L. M., Jr., Jefferson	934-3460
Bashinsky, L. M., Jefferson	933-8581
Batson, W. P., Jefferson	933-7047
Baugh, A. T., Jr., Jefferson	871-9661
Bean, S. K., Jefferson	836-3211
Bearman, A. J., Jefferson	836-3211
Beatty, D. T., Jefferson	933-7503
Bennett, J. C., Jefferson	934-5304
Benton, J. W., Jr., Jefferson	934-4974
Berry, K. W., Jefferson	933-6680
Bird, T. B., Jefferson	933-7081
Blanton, J. H., Jefferson	933-2950
Blaylock, H. I., Jr., Jefferson	933-6430
Bledsoe, W. W., Jr., Barbour	687-3563
Boshell, B. B., Jefferson	322-1707
Bradley, J. D., Jr., Jefferson	934-5376
Branscomb, Louise, Jefferson	933-7494
Brascho, D. J., Jefferson	934-5670
Breaux, C. W., Jefferson	933-9211
Breinig, J. B., Jefferson	934-4011
Briggs, D. D., Jr., Jefferson	934-5411

Brower, W. J., Jefferson	933-8971
Brummett, C. C., Jefferson	591-2535
Bryant, R. E., Jr., Jefferson	681-7902
Bushnell, J. J., Jefferson	933-8031
Cain, W. S., Jefferson	933-2384
Campbell, L. L., Jefferson	933-7371
Capra, C. S., Jefferson	252-6121
Carmichael, D. E., Jefferson	933-8871
Carson, A. J., Jefferson	787-2669
Carter, J. C., Jefferson	933-7271
Carter, J. R., Jefferson	934-4696
Carter, R. D., Jefferson	933-6680
Casey, A. E., Jefferson	933-8711
Caveny, E. L., Jefferson	967-5803
Chapman, L. B., Jefferson	933-8536
Chenoweth, Beach, Jefferson	879-4501
Clark, E. C., Jefferson	933-8101
Clyde, W. A., Jefferson	933-7831
Cohen, I. V., Jefferson	933-6490
Collier, S. W., Jefferson	933-8590
Colvin, C. H., III, Jefferson	933-8281
Compton, M. E., Jr., Jefferson	788-3309
Cope, W. F., Mobile	432-4453
Cosby, R. M., Jefferson	841-2766
Crenshaw, J. F., Jefferson	933-7371
Crommelin, H. J., Jefferson	323-8561
Crow, C. B., Jr., Jefferson	328-0191
Crow, J. B., Jefferson	328-0191
Cunningham, J. A., Jefferson	933-8221
Dahlene, Oscar, Jr., Jefferson	933-8417
Davidson, J. D., Jefferson	933-8911
Deason, A. M., Jr., Jefferson	788-5692
Diseker, Maude, Jefferson	871-2683
Donovan, Barbara, Jefferson	631-5671
Donovan, J. L., Jefferson	631-5671
Eagan, J. T., Jefferson	933-7371
Elliott, Claire B., Jefferson	595-6743
Elliott, H. R., Jr., Jefferson	933-7537
Falletta, G. P., Jefferson	933-6934
Falletta, P. T., Jefferson	933-6934
Ferguson, Hal, Jefferson	787-8668
Freeman, W. J., Jefferson	324-3971
Gantt, C. B., Jr., Jefferson	933-5131

AROUND THE STATE

Garnett, R. L., Russell	298-7811	Karl, E. A., Jefferson	933-7061
Givhan, E. G., Jr., Jefferson	933-7031	Kelly, S. J., Jefferson	933-2250
Goel, Y. S., Jefferson	933-8101	Kent, J. E., Jefferson	788-1663
Gonzalez-Rodriguez, Juan, Jefferson	933-7081	King, W. D., Jefferson	933-7943
Goodman, Seaburt, Jefferson	933-2030	Lamkin, T. G., Jefferson	933-8417
Gordon, G. R., Jefferson	933-2395	Lampert, R. J., Madison	539-9411
Graham, G. S., Jr., Jefferson	933-8981	Maccubbin, D. A., Madison	539-4112
Green, Martha B., Jefferson	933-2040	MacQuigg, D. E., Franklin	356-4854
Greene, J. A., Jefferson	592-8976	Meyer, R. D., Jefferson	323-8561
Guthrie, R. F., Jefferson	933-7331	Moorefield, C. W., Jefferson	836-7201
Guyton, R. D., Jefferson	787-8668	Morris, Sylvia J. B., Cullman	734-3347
Harkey, M. E., Jefferson	785-2121	Nicholson, J. L., Jefferson	933-2950
Harsh, G. R., III, Jefferson	933-8981	Peeler, M. B., Madison	539-1731
Harsh, J. F., Jefferson	933-8871	Rains, D. E., Jefferson	933-9556
Hatzigeorgis, G. P., Jefferson	933-8025	Rudder, W. H., Jefferson	934-5164
Haynes, W. G., Jefferson	787-8678	Whitehurst, R. M., Barbour	687-3563
Henderson, R. E., Jefferson	933-8532	Wilson, B. L., Montgomery	288-0213
Henry, N. W., Jefferson	251-3203	Wood, E. C., Jefferson	871-9771
Hicks, G. M., Jefferson	933-8122	Yohn, K. C., Barbour	687-3563
Higgenbotham, J. M., Jefferson	933-6803		
Hill, S. R., Jr., Jefferson	934-3493		
Hodo, J. B., Jefferson	786-3439		
Holland, C. M., Jr., Jefferson	328-8858		
Howe, E. H., Jefferson	933-7061		
Hughes, B. A., Jefferson	841-5711		
Ippolito, J. G., Jefferson	833-7181		
Jenkins, J. E., Jr., Jefferson	933-7911		
Jordan, J. S., Jefferson	595-3091		
Kahn, S. A., Jefferson	933-8701		
Kant, Fritz, Jefferson	933-7884		

MEMBERS REINSTATED

Cullman County

Morris, Sylvia June Burbank, b 21, mc U. Iowa 45, recip. Iowa 49, 1346 9th St., S. E., Cullman, Alabama 35055. Pd.

Jefferson County

Rudder, William Harwell, b 22, mc U. Ala. 52, sb 53, 619 19th St., S., University Station, Birmingham, Alabama 35294. P.

Adverse Drug Reactions Reports Should Go To FDA

Physicians are advised that the American Medical Association's Department of Drugs no longer maintains an adverse drug reaction reporting program. Reports on adverse drug reactions should be sent to the Hospital Reporting Program, United States Food and Drug Administration, Washington, D. C., and to the individual drug manufacturer.

Reports of adverse reactions should be considered by the medical staff's pharmacy and therapeutics committee and, where applicable, should be utilized in the educational programs of the medical staff.

Health Centers Doing Job But Need Help, AMA Says

In general, community health centers across the nation are succeeding in bringing health care to more people, a detailed study by the American Medical Association says. But the centers could do a better job with better funding methods and more participation by physicians, among other things, the report added.

It called on both government and doctors to correct the deficiencies.

The study of 30 health delivery programs "re-emphasizes a firm belief that there is no single solution that will work in all areas," said the report, by a task force of the AMA's Committee on Community Health Care. "The problems are too complex and vary significantly from one community to another."

Twenty-three urban programs and seven in rural areas were studied, ranging from the large Atlanta Southside Comprehensive Health Center to a small clinic in rural New Mexico. The need for community health programs is indicated by the fact that before the Atlanta center was established, the poor area it serves had one doctor—for 28,000 residents. There was no dentist.

A similar lack of access to health care existed in Estancia, New Mexico, where the nearest doctor is in Albuquerque, 60 miles away.

But the two situations demonstrate the need for a variety of health care programs, said the committee chairman, Donald R. Hayes, M. D., of George Mills, New Hampshire. A large, multi-service facility would not be practical in a sparsely populated rural area, although it is appropriate for Atlanta or Boston.

But the nurse-practitioner who staffs the Estancia clinic—with direct telephone consultation with doctors in Albuquerque, and visits by doctors once a week—is serving the people adequately.

Overall, the report said, "the level of health care was not the same in every program, but in general it was felt to be adequate."

"Each program was attempting to help solve part of the health problems of the people it served and thus was filling a community need, since many people had been receiving little or no health care," the study said.

The Task Force said one major problem was that none of the projects had a single source of funding, and their flow of money was uncertain.

"Because of the multiple sources, the health centers had difficulty in establishing

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a unified program to provide comprehensive health care to all patients," the report said. "Categorical restrictions placed on the use of these funds, particularly federal funds, often caused fragmentation and inefficiency in the organization, administration and operation of the program with the result that some patients could not be provided with the health services they needed."

The custom of annual appropriation of funds, as by government, caused uncertainty about whether programs might continue, and thus "caused serious problems" in recruiting top quality personnel, the report said.

The study said community participation, and participation by physicians, in the health programs varied. All projects had a community board, but only five boards actually set policy, while others merely advised. Community residents, however, showed they had genuine capabilities in such an undertaking:

"Frequently, the residents had been viewed by (program) providers as being unable to operate a program from a financial and organizational standpoint, but these doubts were not substantiated in many cases," the report said. Although residents were untrained to plan and administer a health program, as both they and providers gained experience and understanding of each other "the programs began to operate more effectively and more satisfactorily for all parties."

The role of the local medical profession or

medical society "was of particular interest to the Task Force."

"In at least five programs, the medical society had been the initiator or co-sponsor. In the other programs, the society per se, had not been involved nor was its involvement desired by the community or operators of the program. In many instances, it seemed that if the medical profession had been involved it could have provided valuable advice and assistance. Sometimes the society offered assistance and was rejected, while at other times the society did not wish to become involved."

In many of the more highly developed programs, the report said, "The key person was an articulate, dedicated and committed physician who had a good understanding of the community," and who often "had not received recognition and acceptance from his peers," for his efforts.

The committee recommended that "physicians, both as individuals and as members of the medical societies, should actively participate in planning, development, implementation and operation of health programs at the community level, particularly in areas where there is a shortage of medical and health services."

Doctors were urged to support efforts to eliminate factors harmful to health, such as lead poisoning, malnutrition and poor housing. "The medical profession also should support efforts that will help people escape from poverty and near poverty, including job training and placement."

Winter Word To Drivers

Night starts earlier in the winter and compounds the hazards of driving. Dusk and rush hours coincide; headlights often go on before one is halfway home. What can happen then is underscored by one statistic: Three out of five traffic fatalities happen after dark. So do more than half the fatal accidents on rural highways. All motorists, rural or urban, can reduce the risks of night-

time driving by keeping these rules in mind.

1. Remember that you see less at night, and other drivers have more difficulty seeing *you*.

2. Enter the stream of traffic more cautiously than in the daytime. Make sure the way is clear when you pull into a main

(Continued on Page 454)

Literary Hemorrhoids

Mrs. S.R., 47, high school English teacher. A history of anorectal pain and burning of several years' duration. On and off weight reducing diets, the insufficient bulk of which has aggravated a chronic constipation problem. Subsequent straining at stool has precipitated an acute episode of internal-external hemorrhoids.



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patient

to help
relieve the pain,
itching,
burning associated
with this and
similar anorectal
conditions

prescribe

**Anusol-
HC**[®] hemorrhoidal
suppositories
with hydrocortisone
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Each suppository contains hydrocortisone acetate 10 mg, bismuth subgallate 2.25%, bismuth resorcin compound 1.75%, benzyl benzoate 1.2%, Peruvian balsam 1.8%, zinc oxide 11.0%, and boric acid 5.0%, plus the following inactive ingredients: bismuth subiodide, calcium phosphate, and coloring in a bland hydrogenated vegetable oil base.

Precaution Prolonged or excessive use of Anusol-HC might produce systemic corticosteroid effects. Symptomatic relief should not delay definitive diagnosis or treatment.

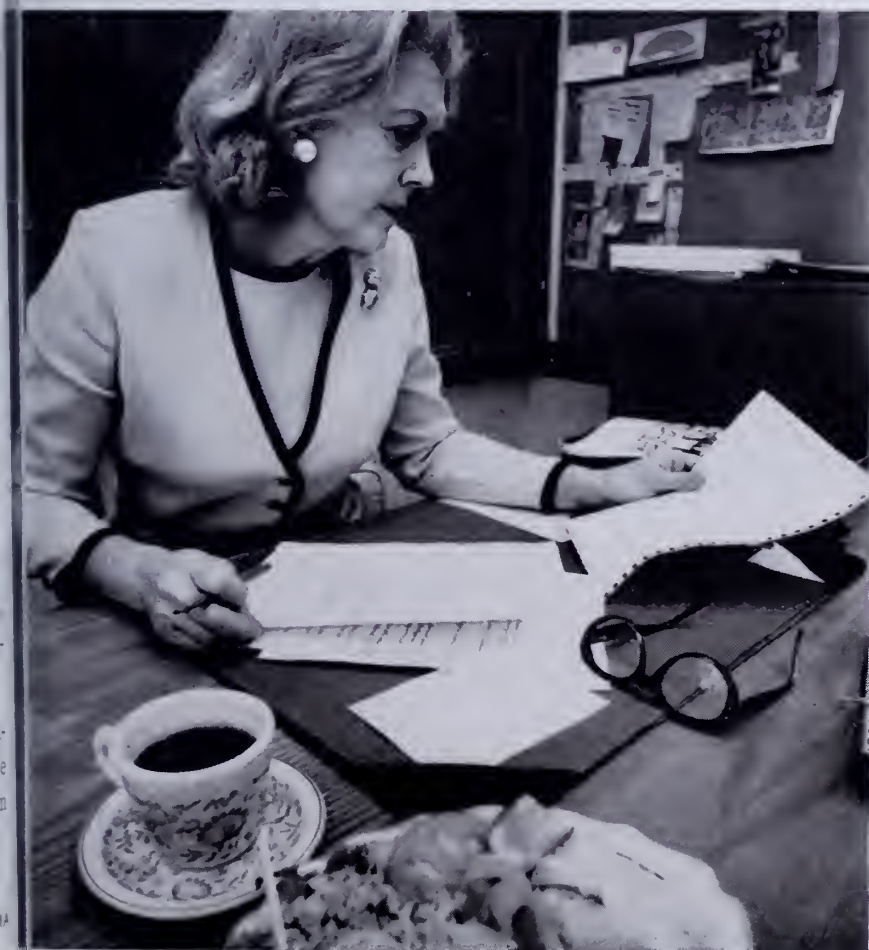
Dosage and Administration Anusol-HC: One suppository in the morning and one at bedtime for 3 to 6 days or until the inflammation subsides. Regular Anusol: One suppository in the morning, one at bedtime, and one immediately following each evacuation.

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Emergency Care Of The Heart Attack Patient

J. E. Stolfi, M. D., Fellow

American College of Physicians

Emergency medical care of patients with a coronary heart attack is divided into pre-hospital and in-hospital phases. In-hospital treatment made excellent progress during the last decade, with the development of coronary care units. Pre-hospital treatment has lagged behind.

Mobile emergency rooms and coronary care vehicles deliver medical care to patients quicker and more efficiently. Equipped with monitors, shock equipment and drugs they allow trained personnel to treat patients on the spot and enroute to the hospital.

Nothing has been done to sustain life until a mobile unit arrives. Now an attempt is being made to provide that missing but essential link. The American College of Physicians has embarked on a mass educational program on cardiopulmonary resuscitation. This prestigious society, by using the expertise of 20,000 members, hopes to implement this lifesaving training program on a nationwide basis.

Cardiopulmonary resuscitation combines mouth-to-mouth respiration and closed heart massage. The latter is accomplished by applying downward pressure on the breastbone with the palm of the hand. By squeezing it toward the backbone, the heart is compressed and blood is forced out into the general circulation. A sudden release of pressure causes the heart to suck blood back into its chambers. If repeated once a second and accompanied by blowing air into the lungs through the mouth (12 times a minute), life can be sustained for periods in excess of 30 minutes.

The knowledge gained in coronary care units, by monitoring patients for long pe-

riods, has shown that when the heart stops beating or is rendered inefficient by a rapid or irregular rhythm, it must be restored within four minutes to preserve the brain.

When cardiac arrest occurs in the street, restaurant, theater, sports stadium, golf course, or home, it is difficult to provide professional care within that critical period. The number of sudden deaths due to heart attacks annually is about 350,000. To save some of them we will have to teach, all old enough to understand, the simple but effective resuscitative procedure outlined above. By instructing a large number, help for those stricken may be at his side. Sustaining life until professional help arrives will save thousands of victims each year. The risks involved if the procedure is performed improperly include damage to ribs and bruised organs. Some people may not have a coronary. Subjecting them to resuscitative procedures will do no harm and potential for good greatly outweighs the risks involved.

The College of Physicians, in cooperation with the Heart Associations, will urge physicians to join in this national effort. Demonstrations on mannequins and movie films will be used to train the general public.

Autopsies have revealed that many people who die suddenly have no apparent heart damage. Death may have been caused by a reversible electrical disturbance in rhythm, known as fibrillation. If resuscitated, these individuals could live a normal life.

A side issue concerns legal action against those who perform the procedure improperly. Several states have enacted laws protecting individuals who perform emergency

Iron therapy for anemia is almost as old as history itself



Celsus's empirical use of iron

Aulus Cornelius Celsus recommended an unusual form of iron therapy for the treatment of enlarged spleens—the oral administration of water that blacksmiths had used for dousing white-hot iron.

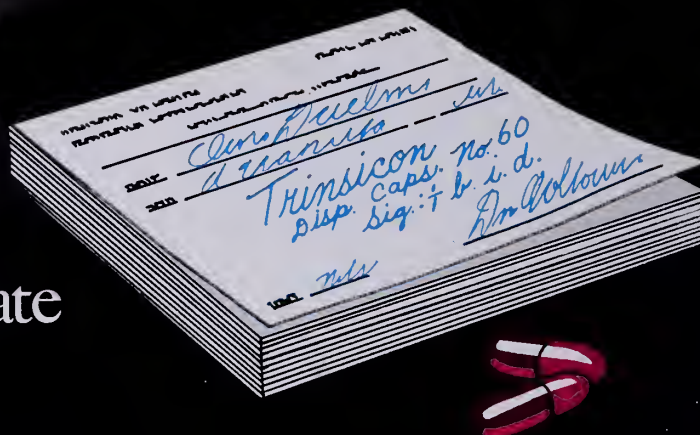
For more modern anemia therapy

Trinsicon[®]
Hematinic Concentrate
with Intrinsic Factor

(See reverse side for prescribing information.)

Trinsicon®

Hematinic Concentrate with Intrinsic Factor



Description: Each Pulvule® contains—

Special Liver-Stomach Concentrate, Lilly

(containing Intrinsic Factor) 240 mg.

Cobalamin Concentrate, N.F., equivalent to Cobalamin 7.5 mcg.

(The total vitamin B₁₂ activity in the Special Liver-Stomach Concentrate, Lilly, and the Cobalamin Concentrate, N.F., is 15 micrograms.)

Iron, Elemental (as Ferrous Fumarate) 110 mg.
 Ascorbic Acid (Vitamin C) 75 mg.
 Folic Acid 0.5 mg.

Indications: Trinsicon is a multifactor preparation effective in the treatment of anemias that respond to oral hematinics, including pernicious anemia and other megaloblastic anemias and also iron-deficiency anemia. Therapeutic quantities of hematopoietic factors that are known to be important are present in the recommended daily dose.

Vitamin B₁₂ with Intrinsic Factor—When secretion of intrinsic factor in gastric juice is inadequate or absent (e.g., in Addisonian pernicious anemia or after gastrectomy), vitamin B₁₂ in physiological doses is absorbed poorly, if at all. The resulting deficiency of vitamin B₁₂ leads to the clinical manifestations of pernicious anemia. Similar megaloblastic anemias may develop in fish tapeworm (*Diphyllobothrium latum*) infection or after a surgically created small-bowel blind loop; in these situations, treatment requires freeing the host of the parasites or bacteria which appear to compete for the available vitamin B₁₂. Strict vegetarianism and malabsorption syndromes may also lead to vitamin B₁₂ deficiency. In the latter case, parenteral therapy, or oral therapy with so-called massive doses of vitamin B₁₂, may be necessary for adequate treatment of the patient.

Potency of intrinsic factor concentrates is determined physiologically, i.e., by their use in patients with pernicious anemia. The liver-stomach concentrate with intrinsic factor and the vitamin B₁₂ contained in two Pulvules Trinsicon provide 1½ times the minimum amount of therapeutic agent which, when given daily in an uncomplicated case of pernicious anemia, will produce a satisfactory reticulocyte response and relief of anemia and symptoms.

Concentrates of intrinsic factor derived from hog gastric, pyloric, and duodenal mucosa have been used successfully in patients who lack intrinsic factor. For example, Fouts *et al.* maintained patients with pernicious anemia in clinical remission with oral therapy (liver extracts or intrinsic factor concentrate with vitamin B₁₂) for as long as twenty-nine years.

After total gastrectomy, Ficarra found multifactor preparations taken orally to be "just as effective in maintaining blood levels as any medication that has to be administered parenterally." His study was based on twenty-four patients who had survived for five years after total gastrectomy for cancer and who had been taking two Pulvules Trinsicon daily.

Folic Acid—Folic acid deficiency is the immediate cause of most, if not all, cases of nutritional megaloblastic anemia and of the megaloblastic anemias of pregnancy and infancy; usually, it is also at least partially responsible for the megaloblastic anemias of malabsorption syndromes, e.g., tropical and nontropical sprue.

It is apparent that in vitamin B₁₂ deficiency (e.g., pernicious anemia), lack of this vitamin results in impaired utilization of folic acid. There are other evidences of the close folic acid-vitamin B₁₂ interrelationship: (1) B₁₂ influences the storage, absorption, and utilization of folic acid, and (2), as a deficiency of B₁₂ progresses, the requirement for folic acid increases. However, folic acid does not change the requirement for vitamin B₁₂.

Iron—A very common anemia is that due to iron deficiency. In most cases, the response to iron salts is prompt, safe, and predictable. Within limits, the response is quicker and more certain to large doses of iron than to small doses.

Each Pulvule Trinsicon furnishes 110 mg. of elemental iron (as ferrous fumarate) to provide a maximum response.

Ascorbic Acid—Vitamin C plays a role in anemia therapy. It augments the conversion of folic acid to its active form, folinic acid. In addition, ascorbic acid promotes the reduction of ferric iron in food to the more readily absorbed ferrous form. Severe and prolonged vitamin C deficiency is associated with an anemia which is usually hypochromic but occasionally megaloblastic in type.

Contraindications and Precautions: Anemia is a manifestation that requires appropriate investigation to determine its cause or causes.

Folic acid *alone* is unwarranted in the treatment of pure vitamin-B₁₂-deficiency states, such as pernicious anemia. Indeed, the use of folic acid in large doses in pernicious anemia without adequate vitamin B₁₂ may result in hematologic remission but neurological progression.

As with all preparations containing intrinsic factor, resistance may develop in some cases of pernicious anemia to the potentiation of absorption of physiological doses of vitamin B₁₂. If resistance occurs, parenteral therapy, or oral therapy with so-called massive doses of vitamin B₁₂, may be necessary for adequate treatment of the patient. No single regimen fits all cases, and the status of the patient observed in follow-up is the final criterion for adequacy of therapy. Periodic clinical and laboratory studies are considered essential and are recommended.

In extremely rare instances, skin rash suggesting allergy has been noted following the oral administration of liver-stomach material. Allergic sensitization has been reported following both oral and parenteral administration of folic acid.

Hemochromatosis and hemosiderosis are contraindications to iron therapy.

Adverse Reactions: In rare instances, iron in therapeutic doses produces gastrointestinal reactions, such as diarrhea or constipation. Reducing the dose and administering it with meals will minimize these effects in the iron-sensitive patient.

Dosage: One Pulvule twice a day. (Two Pulvules daily produce a standard response in the average uncomplicated case of pernicious anemia.)

How Supplied: Pulvules Trinsicon® (hematinic concentrate with intrinsic factor, Lilly), in bottles of 60 and 500 and in Identi-Dose® (unit dose medication, Lilly) in boxes of 100.

(NADA 141)

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procedures. They should be adopted universally. This legal problem emphasizes the need for good instruction. Interest, cooperation, and participation by all members of the medical profession as well as the general public is necessary for the success of this vital drive for life.

Well-equipped mobile units staffed with trained personnel are now delivering medical care in a shorter response time to the patient whose life is being sustained. The number is small but ever increasing. A cardiologist and nurse are best prepared to utilize the electrical defibrillators, monitors, rhythm-controlling medications, and pain-killing drugs. However, the shortages of both precludes their use. To compensate for this, both cardiologists and anesthesiologists have, for many years, offered training programs in the specifics of treatment and ventilatory techniques. Residents, nurses, aides, attendants and even drivers can be trained to use or help in the application of the special equipment and drugs. Thump version, closed cardiac massage and the use of oxygen, after establishing open air passages, are procedures done frequently by individuals trained to treat heart disease and administer anesthesia. Using these techniques enroute to the hospital completes the life sustaining chain. The hospital can be alerted by a two-way communication system and prepare to receive the patient. On arrival at the institution the heart attack victim is transferred from the vehicle to the intensive or coronary care unit without interrupting treatment. When in the special unit, the cardiologist and the anesthesiologist take over and institute treatment which has already been proven to reduce the percentage of deaths.

The above depicts the ideal method of treating the individual whose collapse results from a coronary heart attack. It be-

gins at the time of onset and continues through transportation and arrival at the hospital. This is designated as pre-hospital care. The procedures that take place after arrival are classified as in-hospital emergency care. Many articles are available in medical journals that describe the latter in detail and it need not be repeated here.

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Family Planning Official Reports Largest IUD Study

A five-year study of a double-coil intrauterine device (IUD) covering 27,712 insertions and 541,248 woman months of exposure, was reported recently by Dr. A. F. Caraway, Chief of the Bureau of Maternal Health and Family Planning, Florida Division of Health, at the fourth annual meeting of the International Family Planning Research Association.

The study, the largest ever reported for an IUD in the United States, showed the device to be as effective in prevention of pregnancies as oral contraceptives are.

Dr. Caraway reported a total of 126 pregnancies, in the course of the study, for an in situ pregnancy rate of 0.8 per cent. Other important indices of device effectiveness, including removals and expulsions, were noted by Dr. Caraway as being influenced by experience with insertion techniques. He reported that in the latter part of the five-year study, removals had diminished to eight per cent and expulsions to 11.9 per cent, while continuation rates for the device had improved from an initial low of 75 per cent to more than 80 per cent.

Dr. Caraway emphasized an important factor which, in effect, militates against optimal results in studies in public health clinics: the patient population is drawn from a socioeconomic group in which low motivation, high drop-out rates, and a high incidence of gonorrhea and pelvic inflammatory diseases are common.

Dr. Caraway said that, "When one considers the diversity of training of the physicians and other medical personnel inserting the device, we feel that 126 pregnancies (0.8%), with the device in situ, is exceptional. These results compare favorably in use-effectiveness with any other method available to patients, including oral contraceptives."

Dr. Caraway noted that, "These rates are superior to those reported for other clinic populations." He further noted, however, that "In private patient practice, results with the double coil device can be expected to be still further improved." He said. "It is interesting to note that in a private-patient study, Dr. O. J. Hayes confirmed the expected low pregnancy rate of 0.42 per cent and high continuation rate of 88 per cent. He demonstrated that under highly-controlled conditions of private practice, a low expulsion rate of 7.5 per cent and a low removal rate of 3.7 per cent could be achieved."

Dr. Caraway also reported preliminary data regarding the use of a new double coil device for nulliparous patients, covering "273 patients, representing an estimated 819 woman months of use;" it showed insertion to be easy and virtually painless, even when inserted between menstrual periods. There was no need for anesthesia.

Dr. Caraway said that, "The double coil for nulliparas has distinct advantages over presently-marketed IUDs. The double coil Nullip is easily inserted, with no patient discomfort. No syncope was noted after insertion. While it is too early to determine a pregnancy rate, the data thus far are very favorable, with no pregnancies reported."

The continuation rate experienced to date is 91.2 per cent also highly favorable.

"We believe," Dr. Caraway concluded, "that the use of the double coil Nullip represents a milestone in achievement in the field of intrauterine devices. It will bring the availability of IUD usage to a much higher percentage of our patients. No longer will nullipara patients and the young patients be neglected. Thus, the double coil can now be used in multipara, primipara, and nullipara with confidence."

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PHYSICIAN PLACEMENT SERVICE IN ALABAMA

The Physician Placement Service of the Medical Association of the State of Alabama is designed to assist both physicians and communities. MASA members having knowledge of practice opportunities or wishing to relocate their own practices are urged to communicate with the Placement Service. For further information: write Mr. Emmett Wyatt, Executive Assistant, Medical Association of the State of Alabama, 19 South Jackson Street, Montgomery, Alabama 36104, or Telephone 263-6441.

Locations Wanted

Anesthesiology—

Age 54; Medical College of Alabama, 1949; Board certified; seeking associate or institutional practice. LW-2/9

Age 46; King's College Hospital, London, England 1952; Board certified; seeking solo or group practice. LW-2/10

General Practice—

Age 27; Univ. of Tennessee, 1970; seeking group practice; Available July 1973. LW-3/1

Age 31; University of Kansas, 1966; seeking associate or group practice; Available July 1973. LW-3/2

Age 32; University of Texas, Southwestern, 1968; seeking institutional practice; Available January 1973. LW-3/3

Age 41; Temple University, 1963; National Board; Board eligible; seeking associate or group practice; Available December 1972. LW-3/4

Age 45; University of Alabama, 1963; Available July 1973. LW-3/9

Age 31; St. Louis University, 1966; National Board; seeking associate practice. LW-3/10

Age 32; University of Missouri, 1965; National Board; Board eligible, 1974; seeking solo, associate or group practice; Available Spring of 1973.

Internal Medicine—

Age 31; University of Miami, 1964; Board certified, seeking group or institutional practice. Available January 1973. LW-4/7

Age 30; Univ. of Virginia, 1967; Board eligible; seeking group practice; Available June 30, 1973. LW-4/15

Age 30; Vanderbilt University, 1967; National Board; Board eligible; seeking solo, associate, or group practice; Available July, 1973. LW-4/16

Age 34; Georgetown University, 1964; Board certified; seeking group, associate or institutional practice; Available July 1973. LW-4/18

Age 40; University of Kentucky, 1969; Board eligible; seeking solo, associate, group or institutional practice; Available July 1973. LW-4/19

Age 32; Temple University, 1966; National Board, Board eligible; seeking group practice; Available late summer 1973. LW-4/19

Age 38, Ohio State University, 1963; National Board, Board eligible; seeking group or institutional practice; Available September, 1973. LW-4/22

Age 31; Vanderbilt University, 1967; National Board, Board eligible; seeking associate or group practice; Available July 1973. LW-4/23

Neurology

Age 30; Northwestern University, 1967; National Board; Board eligible; seeking solo, associate, or group practice; Available June 1973. LW-5/1

Age 28; University of Pennsylvania, 1969; National Board, Board eligible; seeking associate or group practice. LW-5/6

Ophthalmology—

Age 31; Chicago Medical School, 1966; National Board; seeking associate or group practice; Available July, 1973. LW-6/6

Age 31; Bowman Gray, 1967; Board eligible; seeking solo, associate or group practice; Available June 30, 1973. LW-6/10

Age 31; S.U.N.Y., Downstate Medical School 1966; National Board, Board certified; seeking solo or group practice; Available July 1973. LW-6/19

Orthopedic Surgery—

Age 31; University of Alabama, 1966; National Board; Available July, 1973. LW-14/4

Age 31; Baylor, 1966; Board eligible; seeking associate practice; available July, 1973. LW-14/5

Age 30; University of Illinois, 1967; Board eligible; seeking group or associate practice; Available June 1974. LW-14/8

Age 38; Loyola University, 1959; Board eligible; seeking solo or associate practice; Available December 1972. LW-14/9

Age 34; University of Michigan, 1964; Board eligible; seeking solo, associate, group or industrial practice; Available January 1974. LW-14/20

Age 32; Emory University, 1966; Board eligible; seeking associate or group practice; Available August 1973. LW-14/21

Otolaryngology—

Age 30; Medical College of Georgia, 1966; Board certified; seeking solo, associate or group practice; Available summer, 1973. LW-16/3

Age 30; Creighton Medical College, 1966; National Board, Board certified; seeking solo, associate or group practice; Available July 1973. LW-16/4

Pathology—

Age 32; Bowman Gray School of Medicine, 1965; Board certified; seeking Hospital practice with or without associate. LW-8/12

Age 36; Creighton University, 1967; National Board, Board eligible; seeking solo, associate or group practice; Available December 1972. LW-8/15

Pediatrics

Age 30; Kansas University, 1968; National Board, Board eligible; seeking associate or group practice; Available August 1973. LW-9/9

Radiology—

Age 43; Univ. of Tennessee, 1962; Available July 1, 1973. LW-10/10

Age 33; Univ. of Kentucky, 1966; Board eligible; seeking solo, associate, or group practice; Available November, 1972. LW-10/11

Surgery—

Age 33; University of Maryland, 1965; seeking solo, group, or associate practice; Available July 1973. LW-11/7

Age 35; Univ. of Oklahoma, 1964; Board eligible; seeking associate or group practice; Available Jan. 1, 1973. LW-11/14

Age 42; Tulane University, 1955; Board certified; seeking associate, group or industrial practice; Available January 1973. LW-11/16

Urology—

Age 36; Louisiana State University Medical School, 1961; Board eligible; seeking associate practice; Available December, 1972. LW-12/4

Age 35; Univ. of Miami, 1964; National Board; Board eligible; seeking associate, group, or institutional practice; Available Jan. 1973. LW-12/5

Age 32; University of Kentucky, 1968; Board eligible; seeking solo, Associate or group practice; Available July 1973. LW-12/8

Age 32; University of South Carolina, 1966; Board eligible; seeking associate or group practice; Available August 1973. LW-12/9

Physicians Wanted

Special Openings—

Wanted, qualified physicians in either OB-GYN, Internal Medicine, or Thoracic Vascular Surgery, to practice with group clinic. The clinic is a 16 man multi-specialty group, and is located in a city of 35,000 with a trade area of 160,000. Excellent recreational facilities and educational opportunities in the area. PW-14

Opportunity for Internist, Board Certified or eligible, interested in Cardiology, in town of 11,000 population—service area 40,000—south Alabama. Modern 86-Bed (JCAH) general hospital with 8-Bed Combination Intensive and Coronary Care Unit under construction. Seven GP's, Certified Surgeon, Radiologist—excellent city school system. PW-15

Internists—one or two needed in University town of 40,000 plus population in Southeast Alabama—Young vigorous multi-specialty group—Generous initial salary and early partnership. PW-16

Internists, Board-certified or eligible. One needed now and another in 1 or 2 years. For early partnership with internist in south Alabama city of 40,000 plus population. New office building adjacent to 181-bed hospital. Practice largely hospital in-patient and Cardiology. PW-21

Opportunity for a Board certified or eligible surgeon to be associated with a Board surgeon in city of 150,000 population. PW-21/1

General Practitioner or Internist for associate or separate practice in Birmingham. Modern office space and excellent hospital facilities. PW-26

Internist wanted, Board certified, Town of 10,000 population, Southwest Alabama. New 51-bed general hospital, I.C.U. Physicians: 5 GP's, Certified Surgeon and Radiologist. Within easy access, excellent fresh and salt water fishing, hunting including deer and turkey. Public and private schools. One hour drive from two metropolitan areas. PW-18

Wanted, internists, generalists, radiologist, orthopedist, general surgeons, town of 15,000 population in county of 45,000 population in southeast Alabama. Attractive for a group setup. High income area and marked scarcity of physicians. Excellent schools and recreational facilities. Newly expanded hospital. PW-17

Wanted: Immediately. Pediatrician to replace recently deceased partner in northeast Alabama. Enter busy practice in a predominantly GP area. Enjoy rural, quiet living with nearby scenic and recreational facilities. Salary, practice, everything negotiable. PW-19

PLACEMENT SERVICE

Wanted: General Practitioner or Internist to join active 4-M. D. professional association—3-GP's, 1 Board Surgeon. Modern offices, accredited 75 bed hospital. Beautiful town of 10,000 with excellent churches, schools (public and private). Salary for 3-6 months then arrangement for full partnership. PW-22

General Practitioners—

For town of 2,000 population located in trade area of 15,000 population in northeast Alabama. Nearest metropolitan centers 30 miles distance. Industrial area. Clinic and some office equipment available. Several churches, schools, and civic clubs. PW-23

Opportunity for GP to join well established four-man partnership; three general practitioners and one board certified surgeon. Practice located in city of 8,000 population, trade area of 60,000, north-central Alabama. Modern new partnership-owned offices adjacent to modern 125-bed fully accredited hospital. Salaried first year with possible partnership status at end of first year. PW-27

Wanted, General Practitioner, Orthopedic Surgeon, General Surgeon to replace recently deceased associate, large Industrial Clinic in Birmingham. Modern Office space. Salary negotiable. PW-28

For community of 1,500 population located in south Alabama near city of 12,000 population. Hospitals located within 25 miles. Office space and equipment available. Farming, cattle and textile industries in the area. Several churches and school. Civic clubs and golf courses. PW-1-1

Opportunity for two general practitioners to assist two established GP's in a progressive comprehensive medical program in rural county of 12,500 population. Modern new office building, fully equipped, located in county seat, 20 miles

west of Montgomery, Alabama. Excellent salary. Several churches, school, and recreation areas. PW-1/8

Opportunity in town of 3,000 population located in trade area of 12,000 population in south Alabama. 23-bed hospital. Office space available. Numerous churches and schools. Recreational areas nearby. PW-1/11

Opportunity for associate in general practice or take over general practice in town of 1,200 population in south central Alabama with trade area of 5,000 population. Well established practice and well equipped office. Located near recreational area. PW-1/12

Opportunity in town of 3,000 population in trade area of 15,000 located in West Alabama. Clinic building available with equipment. Farming and several small industries. Several schools and churches. PW-1/13

Opportunity in south Alabama in town of 2,700 population, trade area of 15,000 population. Nearest large city of 30,000 population located 45 miles. Nearest hospital is 10 miles. One physician now engaged in practice in the town. Necessary arrangements will be made for office space, equipment, and housing. Industrial and agricultural area. Churches, schools, civic and social activities. PW-30

Partner wanted in general practice. Recent death of previous associate. Large family practice located in a suburb of Mobile. Excellent hospitals. PW-31

Opportunity in southeast Alabama in town of 3,000 population, trade area of 15,000 population. Nearest large city, 8 miles, 40,000 population, and 2 large hospitals. Office space and housing readily available. Industrial and agricultural area. Churches, schools, civic and social activities. PW-35

WINTER WORDS TO DRIVERS

(Continued from Page 444)

street.

3. Keep within your own lane. Watch for approaching drivers who may be out of theirs.

4. Pass with extra care, especially on bridges and narrow lanes. If the road is strange, slow down to read signs and directional markers.

5. Never tailgate. Give the driver ahead plenty of room, so your headlights won't reflect in his mirror.

6. Don't rely too long on your parking lights. To see and be seen, you need your driving lights. And keep them clear of mud, slush and snow.

Your vision is the most important factor in safe nighttime driving. Darkness puts an extra strain on the eyes.

(Continued from Page 402)

there is a time and place for it. If another physician's work needs to be judged, let it be done in a recognized legal or medical body or in face-to-face confrontation. Improved patient care should be the basis for that criticism.

Fee Collections

How many legal actions are triggered by patient resentment of a physician's fee or by the sheer inability to pay it, especially if the results of treatment have been less than desired? Nobody knows, but it is no coincidence that investigations frequently disclose histories of arguments about fees which antedate the decision to make a claim or that malpractice suits follow quickly on the heels of legal actions to collect fees.

Even the apparently simple and straightforward procedures for getting out statements and collecting overdue accounts are worth more thought than many doctors seem to give them. Take the trouble to ask a few non-medical friends, they will probably reveal that the least tactful letters they have ever seen, emanate from some of the collection agencies to which physicians often entrust this chore. The agency works on percentage. Its sole concern is to collect the outstanding bill, cut its slice off the top, and close its file. It has no concern for the community image of the doctor-client. There was a case recently where the collection of a six dollar fee triggered a lawsuit which cost several thousand dollars to defend.

- Have an advance understanding with patients of the fee to be charged, what it covers and what it does not cover.
- Invite patients who have not paid within a reasonable time to come in and discuss their accounts.
- Use discretion in efforts to collect from dissatisfied patients or in cases where there have been unexpected complications or poor results.
- The threat of a countersuit should not

be the determining factor in the decision to press for payment or not. However, keep in mind the statutes of limitations concerning contracts and professional liability.

Consultation

From our viewpoint, consultation brings two significant problems into focus; the recommendation to seek consultation and the consultant-patient relationship.

In recommending consultation to a patient, a physician is usually faced with one of two situations: the patient's condition, disease or injury is beyond the qualifications or expertise of the attending physician; or there hasn't been the improvement expected with the selected course of treatment. The decision to recommend consultation is not to be taken lightly, and once made it deserves assertive action on the part of the attending physician.

- Explain carefully to the patient and/or his family why and what consultation is necessary and how it can be obtained.
- Make compliance with the medical advice a condition of continued care.
- Offer assistance in the selection of and arrangements for consultation.
- If the patient doesn't follow the advice, re-emphasize the need in a letter with a copy retained for your files.
- Document in the patient's record all efforts to provide good medical care.

It is no coincidence that more professional liability claims, both justified and unjustified, are brought against physicians who are new and unfamiliar to the patient, than against those whom the patient has known and trusted for a long time. The confidence and trust which make up a patient-physician relationship are the critical factors. They do not develop overnight.

Since the consultant usually doesn't have time to develop this bond, he would find it to his advantage to trade on the relationship

already established. For the benefit of all concerned, the consultant should work as closely as possible with the attending physician; keep him informed; keep him in the picture.

Records

The importance of good patient records is increasing daily. The importance in professional liability is not that they are instigators or triggers for malpractice actions, but rather because of the role they play in the physician's defense of such an action.

They serve as a yard stick in the measurement of the caliber of medical care. Too many physicians have had to rely on juries believing the veracity of their statements based on recollection. When faced with these physicians and the patients they have cared for, juries have a tendency to accept the patient whose alleged injuries are far more visible than the physician's records.

Patient records must contain significant entries of all you do for the patient. These notations should be part of the record no matter how or where they evolved—office, home or telephone.

Consent

Although of recent vintage, the concept of "informed consent" as an allegation in a malpractice suit is gaining in popularity. It has almost become "if all else fails, try informed consent" type of allegation, and it has been a highly successful one.

Traditionally, the physician evaluated the patient, his symptoms and clinical findings; made a diagnosis; selected a course of treatment and told the patient of the diagnosis

and necessary treatment. The patient, depending on many factors—one of which was the trust and confidence he had in the physician, either accepted or rejected the treatment. If something unexpected happened such as the development of a fistula or paralysis, the patient more than likely accepted the physician's explanation of why it happened.

In this age of specialization with the consequential weakening of the bond of trust, the telling of the patient of the diagnosis and selected treatment is no longer sufficient. The physician must explain, *in language understood by the patient*, the nature of the illness or condition, the nature of selected treatment and the alternatives, the probability of success, the possibility of undesired results, and the risks and hazards. In addition, the physician must take steps that will enable him to prove at some future date that this explanation was given to the patient and/or his family.

Admittedly, this is not an easy task. It places the physician in an unenviable position of having to give each patient sufficient information in a digestible form yet not too much information as to frighten the patient away from necessary treatment.

Summary

This brief review—of some problems facing physicians in the current professional liability scene—is one of the insurance company's roles in the prevention of malpractice claims and suits. If there is to be a change, it is up to the individual physician. The insurance company's role is to inform, the physician is the doer.

It is difficult to make our material condition better by the best laws, but it is easy enough to ruin it by bad laws.

—Theodore Roosevelt

We are under a Constitution, but the Constitution is what the judges say it is.

—Charles Evans Hughes



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In tubes of 1 oz. and ½ oz. for topical use only.

NEOSPORIN for topical infections due to susceptible organisms, as in impetigo, surgical aftercare, and pyogenic dermatoses.

Precaution: As with other antibiotic preparations, prolonged use may result in overgrowth of nonsusceptible organisms and/or fungi. Appropriate measures should be taken if this occurs. Articles in the current medical literature indicate an increase in the prevalence of persons allergic to neomycin. The possibility of such a reaction should be borne in mind.

Contraindications: Not for use in the external ear canal if the eardrum is perforated. This product is contraindicated in those individuals who have shown hypersensitivity to any of its components.

Complete literature available on request from Professional Services Dept. PML.



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Health Care In Sweden—Condition Deteriorating

The scene is a typical hospital in Sweden. Exhausted hospital personnel are processing long lines of patients. Some of them waited years for elective medical care. This is the bleak picture of health care in Sweden painted in a series of articles printed earlier this year by *Expressen*, Sweden's largest daily newspaper.

People in Sweden are not permitted to choose their doctors or hospitals. They must go to the hospital serving the district where they live. Under Sweden's "seven crowns reform," which began about two years ago, a patient pays a flat rate of seven crowns (about \$1.50) for a doctor's visit or hospitalization. All private institutions, private doctors or medical clinics are excluded from this flat rate, and entirely different regulations cover dentistry.

In its series of articles, *Expressen* zeroed in on several people who had been entrapped in the bureaucratic web of Sweden's socialized medicine:

- Anna-Britta Eriksson, 40, of Goteborg, had been waiting for 10 years to have a gallstone operation. Shortly after her gallstones were discovered, she moved from Sundsvall to Goteborg. Several years later when her gallstones again gave her difficulty, an operation was scheduled for one week later. However, this was postponed when the hospital discovered it had forgotten to obtain her X rays taken earlier in Sundsvall. A year later the hospital phoned and said the operation had been rescheduled for the next morning. Mrs. Eriksson was unable to plan to enter the hospital on such short notice and asked that the operation be post-

poned and that she be given more notice the next time. At the time the story was printed, Mrs. Eriksson had not heard from the hospital again, and her chronic gallstone ailment was being treated with various medications and diet.

- Pia, 24, had suffered from a thyroid enlargement. When this condition flared up again, she found herself without medication. The hospital in Sabbatsbergs told her there was a half-year waiting time to be examined. Next she phoned her old family physician, but he had moved. After obtaining a requisition from the district physician, she waited four months for the first examination. Laboratory tests were scheduled for many months later. After nine months and a weight reduction from 107 to 96 pounds, Pia finally got her medication.

- A 52-year-old Casteras laborer had been suffering from diminished visual acuity and watering eyes. He was told he could come in for an eye examination "in about a year." According to the chief physician in the ophthalmological clinic, the waiting time for new patients is 14 months. Waiting time for eye operations is one to two months, and this time cannot be shortened, even if desirable.

In Sweden the chance to survive often depends on where one lives, a physician told *Expressen*. In a survey of 29 hospitals throughout the country, *Expressen* found lines of patients everywhere. Sometimes waiting times ran into the years. Less urgent cases often were not examined at all. However, in emergency cases care is given expeditiously.

Merry Christmas and good cheer,

And don't you think it's nice

That Christmas comes but once a year?

Who could afford it twice!

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While Valium can be a most helpful adjunct to your counseling, it should be prescribed only as long as excessive psychic tension persists and should be discontinued when you decide it has accomplished its therapeutic task. In general, when dosage guidelines are followed, Valium is well tolerated (see Dosage). For convenience it is available in 2-mg, 5-mg and 10-mg tablets.

Drowsiness, fatigue and ataxia have been the most commonly reported side effects.

Until response is determined, patients receiving Valium should be cautioned against engaging in hazardous occupations requiring complete mental alertness, such as driving or operating machinery.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

Dosage: Individualize for maximum beneficial effect.

Adults: Tension, anxiety and psychoneurotic states, 2 to 10 mg b.i.d. to q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; adjunctively in skeletal muscle spasm, 2 to 10 mg t.i.d. or q.i.d.; adjunctively in convulsive disorders, 2 to 10 mg b.i.d. to q.i.d. *Geriatric or debilitated patients:* 2 to 2½ mg, 1 or 2 times daily initially, increasing as needed and tolerated. (See Precautions.) **Children:** 1 to 2½ mg t.i.d. or q.i.d. initially, increasing as needed and tolerated (not for use under 6 months).

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THE JOURNAL

of the

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including aplastic anemia, may occur suddenly despite regular hemograms, and may become manifest days or weeks after cessation of drug. Any significant change in total white count, relative decrease in granulocytes, appearance of immature forms, or fall in hematocrit should signal immediate cessation of therapy and complete hematologic investigation. Unexplained bleeding involving CNS, adrenals, and GI tract has occurred. The drug may potentiate action of insulin, sulfonylurea, and sulfonamide-type agents. Carefully observe patients taking these agents. Nontoxic and toxic goiters and myxedema have been reported (the drug reduces iodine uptake by the thyroid). Blurred vision can be a significant toxic symptom worthy of a complete ophthalmological examination. Swelling of ankles or face in patients under sixty may be prevented by reducing dosage. If edema occurs in patients over sixty, discontinue drug. **Precautions:** The following should be accomplished at regular intervals: Careful detailed history for disease being treated and detection of earliest signs of adverse reactions, complete physical examination including check of patient's weight; complete weekly (especially for the aging) or an every two week blood check; pertinent laboratory studies. Caution patients about participating in activity requiring alertness and coordination, as driving a car, etc. Cases of leukemia have been reported in patients with a history of short- and long-term therapy. The majority of these patients were over forty. Remember that arthritic-type pains can be the presenting symptom of leukemia.

Adverse Reactions: This is a potent drug; its misuse can lead to serious results. Review detailed information before beginning therapy. Ulcerative esophagitis, acute and reactivated gastric and duodenal ulcer with perforation and hemorrhage, ulceration and perforation of large bowel, occult GI bleeding with anemia, gastritis,

epigastric pain, hematemesis, dyspepsia, nausea, vomiting and diarrhea, abdominal distention, agranulocytosis, aplastic anemia, hemolytic anemia, anemia due to blood loss including occult GI bleeding, thrombocytopenia, pancytopenia, leukemia, leukopenia, bone marrow depression, sodium and chloride retention, water retention and edema, plasma dilution, respiratory alkalosis, metabolic acidosis, fatal and nonfatal hepatitis (cholestasis may or may not be prominent), petechiae, purpura without thrombocytopenia, toxic pruritus, erythema nodosum, erythema multiforme, Stevens-Johnson syndrome, Lyell's syndrome (toxic necrotizing epidermolysis), exfoliative dermatitis, serum sickness, hypersensitivity angitis (polyarteritis), anaphylactic shock, urticaria, arthralgia, fever, rashes (all allergic reactions require prompt and permanent withdrawal of the drug), proteinuria, hematuria, oliguria, anuria, renal failure with azotemia, glomerulonephritis, acute tubular necrosis, nephrotic syndrome, bilateral renal cortical necrosis, renal stones, ureteral obstruction with uric acid crystals due to uricosuric action of drug, impaired renal function, cardiac decompensation, hypertension, pericarditis, diffuse interstitial myocarditis with muscle necrosis, perivascular granulomata, aggravation of temporal arteritis in patients with polymyalgia rheumatica, optic neuritis, blurred vision, retinal hemorrhage, toxic amblyopia, retinal detachment, hearing loss, hyperglycemia, thyroid hyperplasia, toxic goiter, association of hyperthyroidism and hypothyroidism (causal relationship not established), agitation, confusional states, lethargy, CNS reactions associated with overdosage, including convulsions, euphoria, psychosis, depression, headaches, hallucinations, giddiness, vertigo, coma, hyperventilation, insomnia, ulcerative stomatitis, salivary gland enlargement (B)98-146-070-G

Serious side effects do occur. Select patients carefully (particularly the elderly) and follow them closely in line with the drug's precautions, warnings, contraindications and adverse reactions.

For complete details, including dosage, please see full prescribing information.

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President's Page

Our Association's Physicians' Liability Insurance Program

We are now nearing six month's operation in our Physician's Liability Insurance Program. At present we have only slightly more than 25 per cent membership participation. The Wausau people say they are not concerned. But I am concerned.

Why only 25 per cent membership participation? I do not know. Certainly enough publicity was given out regarding this program. Surely physicians are cognizant of the more than 25 per cent yearly increases in liability insurance premiums up to the time our Association began its program when all of a sudden all the companies handling this insurance in Alabama suddenly withdrew their 50 to 100 per cent rate increase requests. This action by these insurance companies must give evidence that the premiums they were charging were not justifiable.

I cannot comprehend the reasoning of some physicians for not joining our Association's Program, simply because their premiums for this particular classification in some other company happen to be a few dollars cheaper. Under our program we have full financial disclosure. If the loss experience does not justify the expenditure for a year's operation, then the next year the premium rates will be reduced and there is a possibility that a dividend will be paid. As of now there have been no liability claims submitted in regard to any member participating in our State Association sponsored program.

Other insurance companies just cannot compete with our Association's program for very long because of several reasons. Asso-



DR. CAMP

ciation members not considered good risks are not accepted. Out of court settlements will not be tolerated unless the claim is justifiable. Nuisance cases will be fought. An education program in avoiding liability suits is now underway with all Wausau policy holders.

If we do not get the required 75 per cent participation within three years, Wausau can withdraw. This is what concerns me. Getting a satisfactory physician liability insurance program was certainly a frustrating experience. In my opinion no state has as good a program as does Alabama. If we should lose this program, it would be very difficult to get another Association sponsored program started. This would certainly be an almost unforgivable predicament.

A stylized, handwritten signature in dark ink, appearing to read 'E. E. Camp'.

E. E. Camp, M. D.
President Elect



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two tubes...two weeks



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Indication: Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indication as follows:
"Probably" effective: For the treatment of vulvovaginal candidiasis.
Final classification of the less-than-effective indications requires further investigation.

Contraindications: None known. **Precautions:** Cases of sensitization and irritation have been reported. When noted the drug should be discontinued. **Dosage:** One applicatorful intravaginally twice daily for a period of 14 days. Course of therapy may be repeated if necessary.

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AUXILIARY PLEDGE

"I pledge my loyalty and devotion to the Woman's Auxiliary to the American Medical Association. I will support its activities, protect its reputation and ever sustain its high ideals."

The Nutrition Quagmire

The Nutrition Quagmire—Where Do We Go From Here was the title of a talk given by Dr. Sara Hunt, visiting professor of Nutrition and Biochemistry at Tuskegee Institute, at our Fall Workshop which was held at the Huntsville Jetport on November 1st and 2nd. Miss Hunt has spent many years in research, teaching, and working as a public health nutritionist. She not only understands the facts, but also knows something about spreading sound nutrition information to the public.

Nutrition is a new area of interest for the Woman's Auxiliary. It is another part of our health education program. Our objective this year has been self education. Dr. Hunt got us started in the right direction. This was done by making us aware of facts and fallacies.

Every time we pick up a paper, listen to the radio or television, we get some kind of nutrition information. Some of it is true, some false, but how do we sift fact from fancy? This is hard when the fancy sounds so much better than the fact. People spend thousands of dollars each year for miracle foods which are suppose to make them thin, beautiful, and energetic. In a land of plenty we still find many nutrition problems. Many of these are caused from a lack of knowledge, not a lack of money. Dr. Philip L. White, Director Dept. of Foods and Nutrition American Medical Association, says that misinformation is one of the greatest deterrents to the achievement of an adequate diet in this country today. Folk medicine is still more popular than the "Basic Four



MRS. HANSBERRY

Food Groups." When will mothers learn that fat babies are not necessarily healthy ones? Milk fat anemia is still a problem in infant feeding. Could it be that the "clean plate club" is responsible for over feeding at an early age, and then these early eating habits cause problems throughout life?

A new problem popping up over this country is that of fabricated or textured foods. More and more of these foods are appearing on the market. They taste like the old, familiar foods, but they do not contain the same nutrients. Have you tried simulated or filled milk? Another problem area is the organic farming craze. This has

great appeal to that segment of the population that wants to go back to the simple life. Most of these people, unable to farm themselves, will pay exorbitant prices for foods advertised as natural or organically produced. T. V. advertising on children's programs is another problem area. This is having a tremendous negative effect upon the eating habits of the young. Thirty-eight per cent of all food commercials have to do with oversweetened and over priced breakfast cereals.

Adelle Davis is fast becoming a very popular person in the nutrition world. We could call her the layman's nutrition expert. She has a talent for writing and for getting on popular television shows, but unfortunately, is disseminating some erroneous information and making food fadists out of many people.

The fact that she doesn't think it necessary to stick strictly to the truth makes her writings very dramatic and interesting. Everything she says has a seed of truth in it, but she embroiders and embellishes this truth until the true picture is pretty distorted. She does make some good points in her book "Let's Eat Right To Keep Fit." The main problem is that she writes like a storyteller rather than a scientist. The question might be can one do both?

Why can't the nutritional scientist get the attention of the public like Miss Davis does? Maybe they get lost in their academic worlds, place too much emphasis on research and publications in scientific journals, and share their information only with each other. We are beginning to see some good books on the market, such as "Food Power; A Doctor's Guide to Common Sense Nutrition" written by Dr. L. Earle Arnow. Another good one is "Let's Talk About Food" published by the AMA. This is an inexpensive paper back written for the layman. How do we get this book into the hands of the public? It could be made available to the patients through the doctor's office. The price is \$1.00 for the public, but the doctor and his wife can get these from the AMA office for \$.50. This is one way of combating nutrition misinformation.

A. Rae Hansberry

A. Rae Hansberry
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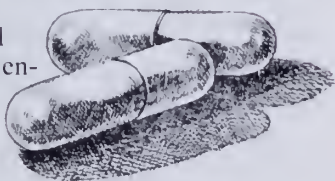
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Contraindications: Patients with glaucoma; prostatic hypertrophy and benign bladder neck obstruction; known hypersensitivity to chlordiazepoxide hydrochloride and/or clidinium bromide.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering Librium (chlordiazepoxide hydrochloride) to known addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards. As with all anticholinergic drugs, an inhibiting effect on lactation may occur.

Precautions: In elderly and debilitated, limit dosage to smallest effective amount to preclude development of ataxia, oversedation or confusion (not more than two capsules per day initially; increase gradually as needed and tolerated). Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients. Employ usual precautions

in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: No side effects or manifestations not seen with either compound alone have been reported with Librax. When chlordiazepoxide hydrochloride is used alone, drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally with chlordiazepoxide hydrochloride, making periodic blood counts and liver function tests advisable during protracted therapy. Adverse effects reported with Librax are typical of anticholinergic agents, *i.e.*, dryness of mouth, blurring of vision, urinary hesitancy and constipation. Constipation has occurred most often when Librax therapy is combined with other spasmolytics and/or low residue diets.



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GUEST EDITORIAL

The Crisis In Mental Health

The State Mental Hospital System is dead: It has been killed by ignorance of what constitutes real health needs of the people with the help of inaccurate, unrealistic reporting of the newspaper media and play upon the emotions of the people of the realistic need of Bryce, Partlow and Searcy Hospitals. Then there is the inefficiency and ineffectiveness of the Mental Health Board in dealing with the real Mental Health issues of the people of the State of Alabama. The poor selection of the top echelon to direct a program of psychiatric treatment, which was impotent and inept from the very outset, contributed to the present state. The final death dealing blow to the State Hospital System came from an uninformed personage, high in the Federal Judiciary System, who made it impossible for the functioning and organization of the State Hospital System to carry out even a minimum of treatment in the institutions. This led to a refusal of the State Hospital officials to accept anyone by commitment for treatment by a Judge of Probate or anyone else, no matter what the illness and regardless of the need, unless they can be treated and released in 3 weeks. The avowed purpose of our present Mental Health Commissioner is to reduce the State Hospital census and has made an appeal to all community agencies to sponsor some program of follow up.

This means that the entire State of Alabama in each community, will be faced with the overwhelming task of having to deal with approximately 5,000 persons of varying

degrees of psychiatric illness without the proper means to do so, medical, psychiatric, other trained personnel for after care, rehabilitation facilities, or the necessary funds.

I have other comments to make about the State Hospital situation. It is a known fact to psychiatrists in practice that breaking down the Mental Hospital walls will not eradicate Mental Illness or the problems associated. There are persons with Mental illness who will remain profoundly negative, confused and unable to direct or develop their inner resources toward life satisfying goals without help of Community Health resources. It is also doubtful that turning this person out into a society where he is unable to compete will serve any useful purpose to the person or society.

This brings up another subject, Comprehensive Mental Health. Certain areas are designated to serve and provide in-patient hospital service, outpatient and emergency service, consultation and education, partial hospitalization and prevention of mental illness. This whole concept of how psychiatric illness should be treated was a drawing board solution and the product of a think-tank of some political regime and not at all the solution of people who have the knowledge to treat mental illness on the level of primary care.

I do not know but possibly 3 or 4 Comprehensive Mental Health Centers in Alabama that are providing adequately, the essential functions outlined. The original plan

called for 19 centers. From the very outset, the essential plan was to use the man-power in other related Mental Health fields to carry out the primary goals. They have failed because all Mental Health Centers were not directed by trained psychiatrists with a broad knowledge of the problems and clear cut treatment goals. I have also observed that if the private psychiatric community is not informed and actively participating in planning and in making policy in each locale, that the effort of any Comprehensive Community Program will result in failure. Additional factors that defeat this kind of program is the unwillingness of the community to finance Mental Health after the initial Federal grant is depleted. Federal grants are deceptive in that they only finance the professional staff for a very limited period.

The attack upon Mental Institutions for all of the problems and the frustrations of society about Mental illness will not make the problem go away. The only good that can ultimately come of this is to focus attention on a major problem and hopefully bring diverse opinions and groups together for a common purpose. This also may enable participation and responsibility for treating the mentally ill to be jointly shared by psychiatrists, psychologists, psychiatric social workers, nurses and counselors trained in other related fields but hopefully with more clear cut goals and more satisfying results.

If there ever was a crisis in Mental Health in Alabama, the time is now.

Morris B. Mann, M. D.

Montgomery, Alabama

The Emergence Of Emergency Physicians

William T. Haeck, M. D., Project Director

Emergency Medical Services Section

Division of Health, State of Florida

The emergency physician is a unique entity in American Medicine. He was created by public demand. During the 50's and 60's increasing public mobility, decreasing availability of family physicians, and increasing demands of the consumer for immediate care led many individuals to begin to seek care in emergency departments. Visits to emergency departments over a ten year period rose by 300% in some places.

The hospital and the medical staff of the hospital share a joint responsibility to treat any patient who arrives at the hospital emergency department seeking care. The increasing visit load in the emergency department increased the work load of already busy hospital medical staffs. Many staff members also began to feel uneasy about being responsible for complicated cases they might not have seen or treated since the time they started specializing.

Hospitals and their medical staffs developed two generally accepted plans to meet their obligation to treat emergency patients and to free the medical staff to meet all their other obligations. The plans were named for the cities and hospitals where they first evolved.

The Pontiac Plan ensures that there will be a physician on duty in the emergency department 24 hours a day. This physician and his partners (sometimes as many as 40 or 50) maintain their medical practices and agree to be present in the emergency department when assigned there by the group leader.

The Alexandria Plan is a further refinement. It also guarantees the presence of a physician(s) in the department 24 hours daily. In this plan, the physicians in the department limit their practice to emergency

medicine and their entire medical practice is limited to the emergency department.

Many physicians are now making careers of emergency medicine. They have obtained special training to give them expertise in resuscitation, wound care, correction of shock, acute heart problems and many acute and common problems of every day medical practice. Their practices involve stabilization of acute problems and initial treatment of non-life-threatening problems and referral of the patient for definitive care. In many instances, the emergency department is now the point where patients enter the health care system.

Many emergency physicians are serving their communities by actively becoming involved in stimulating their communities to upgrade and improve the total emergency medical services system in the community. They are often in the battle lines fighting for improved ambulance services. Many are out in the community teaching the principles

of good first aid and cardiopulmonary resuscitation. They are involved in training ambulance attendants and are involved in the struggle to bring local, state and federal laws up to date to legislate the improved EMS systems this country needs.

Organized medicine is starting to recognize the expertise of the emergency physician. Some state medical societies recognize emergency medicine as a specialty. Medical schools are beginning to train young physicians in emergency medicine as a primary career.

The emergency physicians have organized to form the American College of Emergency Physicians. It now has over 3,000 members. University Emergency Department Physicians have organized the University Association for Emergency Medical Services. Both groups are fighting for better emergency care for the American public through better training for emergency physicians, better quality emergency departments and better community emergency medical care systems.

Doctors Needed

Desirable area for group practice in Hokes Bluff, Alabama in Gadsden area. Good schools, churches and civic clubs. Incorporated town with industrial board presently actively seeking industry and new business. Area population approximately 15,000. Modern hospital with latest facilities near. Temporary office building available with owners proposing to build new modern clinic. Need at least one general practitioner, internist, and/or pediatrician to begin group practice. For information or appointment for tour of area, contact: Mr. William C. Street, Chairman of Industrial Board (Medical Planning Division), Rt. 7, Box 402, Gadsden, Alabama 35903. Telephone: (205) 492-3521 or 492-4238.

Rib Bone Connected To The Jaw Bone?

Work now underway at the University of Toronto (Canada) may lead to the development of a technique that will allow surgeons to use a person's rib bone to repair or replace facial bone, according to the National Society for Medical Research.

Dr. David McCullough of the Royal Victoria Hospital reported the work he has been doing with Dr. John M. Frederickson of Toronto, at the American College of Surgeons meeting in San Francisco.

The scientists found that by using microsurgical techniques they could take a dog's ninth rib, along with its intercostal artery and vein, and reposition it in the neck of their experimental animal.

Dr. McCullough says that of 20 grafts done

in their experimental animal studies, 85 per cent survived. He called this "probably the highest survival rate ever reported for composite grafts."

The importance of such a study is to be found in the field of otolaryngology and head and neck surgery. If the technique can be refined for use in humans, patients who have had bone and tissue removed stand a better chance for effective reconstruction of their features.

The shape of the rib is very useful, particularly in repairs of the mandible. Soft tissue which can be attached to the graft can also be put to good use by the surgeon in the reconstruction process.

In addition, the technique may be applied whenever a patient loses bone due to trauma, and in cases of congenital bone defects. The two researchers indicate they will continue their work with live animals and human cadavers until they feel they have most of the major problems, such as resorption and thrombosis, solved.

BOOK REVIEW

Medical Advice For The Traveler

It has become increasingly important for every traveler, whether planning two weeks in Europe, two months in a more exotic spot, or actual residence abroad, to know and understand the medical challenges he may face. In this concise and informative guide, Dr. Cahill, whose major professional interest has long been the medical needs of the traveler, provides a common-sense approach to such subjects as motion sickness . . . the time-zone syndrome . . . dietary concerns in foreign lands . . . inoculations that should be taken before the trip . . . a complete medical kit that every traveler should carry with him . . . what to do should illness occur during the trip . . . and the proper medical steps to take when the traveler returns home.

About The Author

Dr. Kevin M. Cahill's involvement in the international world of the 1970's is evidenced not merely in his numerous medical research articles and books from Africa and Asia, but by his simultaneously serving now as the Director of the Tropical Disease Center, Lenox Hill Hospital, in New York City, and as Professor and Chairman of Tropical Medicine at the Royal College of Surgeons, in Ireland.

A graduate of Cornell Medical College, he received further degrees in tropical medicine from the Royal College of Physicians and from the University of London. He has had extensive field experience in India and throughout Africa.

During his time in the U. S. Navy he served as Head of the Department of Epidemiology and Director of Tropical Medicine at the American medical research unit in Cairo, Egypt. In addition to his present academic appointments he is also consultant on tropical diseases to the United States Public Health Service, the United Nations Health Service, and to numerous foreign governments and international corporations.



PHYSICIAN SUITES AVAILABLE. New Professional Office Building adjacent San Jacinto Methodist Hospital, Baytown, Texas. City of 50,000; 30 minutes Houston; home Humble Oil & Refining, U. S. Steel. High average income. On Bay. Outstanding schools, Lee College. Contact Executive Director, San Jacinto Methodist Hospital, 1101 Decker Drive, Baytown, Texas 77520, (713) 427-0411.



Health Care In Sweden-- Condition Deteriorating

The scene is a typical hospital in Sweden. Exhausted hospital personnel are processing long lines of patients. Some of them waited years for elective medical care. This is the bleak picture of health care in Sweden painted in a series of articles printed earlier this year by *Expressen*, Sweden's largest daily newspaper.

People in Sweden are not permitted to choose their doctors or hospitals. They must go to the hospital serving the district where they live. Under Sweden's "seven crowns reform," which began about two years ago, a patient pays a flat rate of seven crowns (about \$1.50) for a doctor's visit or hospitalization. All private institutions, private doctors or medical clinics are excluded from this flat rate, and entirely different regulations cover dentistry.

In its series of articles, *Expressen* zeroed in on several people who had been entrapped in the bureaucratic web of Sweden's socialized medicine:

- Anna-Britta Eriksson, 40, of Goteborg, had been waiting for 10 years to have a gallstone operation. Shortly after her gallstones were discovered, she moved from Sundsvall to Goteborg. Several years later when her gallstones again gave her difficulty, an operation was scheduled for one week later. However, this was postponed when the hospital discovered it had forgotten to obtain her X-rays taken earlier in Sundsvall. A year later the hospital phoned and said the operation had been rescheduled for the next morning. Mrs. Eriksson was unable to plan to enter the hospital on such short notice and asked that the operation be postponed and that she be given more notice the next time. At the time the story was printed, Mrs. Eriksson had not heard from the hospital again, and her chronic gallstone ailment was being treated with various medications and diet.

- Pia, 24, had suffered from a thyroid enlargement. When this condition flared up again, she found herself without medication. The hospital in Sabbatsbergs told her there was a half-year waiting time to be examined. Next she phoned her old family physician, but he had moved. After obtaining a requisition from the district physician, she waited four months for the first examination. Laboratory tests were scheduled for many months later. After nine months and a weight reduction from 107 to 96 pounds, Pia finally got her medication.

- A 52-year-old Vasteras laborer had been suffering from diminished visual acuity and watering eyes. He was told he could come in for an eye examination "in about a year." According to the chief physician in the ophthalmological clinic, the waiting time for new patients is 14 months. Waiting time for eye operations is one to two months, and this time cannot be shortened, even if desirable.

In Sweden the chance to survive often depends on where one lives, a physician told *Expressen*. In a survey of 29 hospitals throughout the country, *Expressen* found lines of patients everywhere. Sometimes waiting times ran into the years. Less urgent cases often were not examined at all. However, in emergency cases care is given expeditiously.

Hunger is best for measles, and plenty of food for smallpox.

—Chinese proverb.

Wherever the art of medicine is loved, there also is love of humanity.

—Hippocrates, c. 400 B.C.

"The history of science, and in particular the history of medicine . . . is . . . the history of man's reactions to the truth, the history of the gradual revelation of truth, the history of the gradual liberation of our minds from darkness and prejudice."

— George Sarton, from "The History of Medicine Versus the History of Art"

Are combination drug products useful in treatment involving concomitant use of two or more drugs?

Opinion

Results of a questionnaire to 7,000 physicians:

62.9%

Believe combination drug products are useful.

13.8%

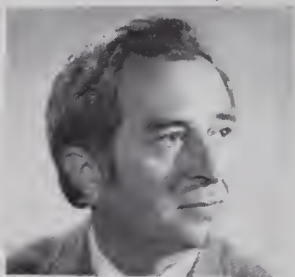
Do not believe combination drug products are useful.

Are combination drug products useful in treatment involving concomitant use of two or more drugs

Opinion & Dialogue

Doctor of Medicine

Louis Lasagna, M.D.
Professor and Chairman
Department of
Pharmacology & Toxicology
University of Rochester
School of Medicine
and Dentistry



Obviously, many drugs are given concomitantly. Whether it makes sense to combine medications in one preparation, be it capsule, tablet, or liquid, is a question that can be answered only by examining the advantages and disadvantages in the individual case.

Among the advantages is, first of all, convenience. The more medications that are taken concurrently and the more complicated the directions, the less likely the patient is to take medications accurately. From the standpoint of convenience and accuracy, and economy as well, you can make an important ease for putting medications together in one preparation, as long as they are compatible.

By the same token, when you prescribe a properly tested and rational combination, you should have less worry about pharmaceutical or pharmacological compatibility — and about reasonable dosage ratios as well. Compatibility of the formulation should be demonstrated in the laboratory and clinic before the product is available for prescription — which is more than can usually be said for

the physician's own spontaneous creations. And, the dosage ratios employed in rational precompounded combinations are designed to meet the needs of substantial numbers of "typical" patients.

There is no doubt that many "atypical" patients are to be found, and for them the prefabricated combination must be rejected. But that hardly argues for eliminating rational combinations from the market. Think, for example, of the problems that would arise if the components of widely accepted combinations, like the oral contraceptives and the diuretic-antihypertensives, always had to be prescribed, purchased and ingested separately.

One disadvantage that comes to mind is some doctors' unawareness of the ingredients a given combination contains. For example, a doctor might know that a patient is allergic to aspirin but forget that a certain analgesic mixture, which he knows only by its trade name, contains aspirin. His prescription, then, causes considerable discomfort, to say the least. This problem is a function of physician education, rather than of combination therapy as such. Improving doctors' knowledge about all medicaments they prescribe is a problem that deserves tackling on its own.

Another accusation leveled at combination drugs is that they encourage sloppiness of diagnosis and treatment. In many cases, however, a combination may prove to be the most effective choice. A good ex-

ample of the usefulness of combinations appears in a recent article in the *Journal of Chronic Diseases* on the efficacy and side effects of an antihypertensive containing three ingredients, in which the track records of the combination drug and the individual ingredients were compared. Interestingly enough, whether the drugs were given individually or together, incidence and severity of side effects were the same. But blood pressure control was invariably better when the drugs were taken in one combination tablet than when they were taken separately (in "titratable" dosage) or in two or three different tablets.

Deciding which combinations constitute rational therapy obviously leads to a discussion of who is to determine which should be used and which should not. Realistically, I think combinations should be evaluated somewhat differently if they are old and established or new and untried.

In today's regulatory atmosphere, there is no possibility of a new combination being put on the market without a substantial amount of acceptable evidence in the form of controlled trials that show it to be safe and efficacious. On the other hand, I believe a different set of standards should apply to combination preparations that have been around for a long time. In other words, physician acceptance over a long period should be given some weight as evidence of the efficacy and safety of these drugs.

The FDA, however, does not seem to share this attitude. It often requires, for these older products, controlled trials that will monopolize the time of already overtired investiga-

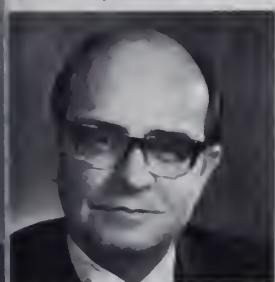
tors and cost a great deal of money. I wish we could agree on a "grandfather clause" approach to preparations that have been in use for a number of years and that have an apparently satisfactory track record.

For example, I think some of the antibiotic combinations that were taken off the market by the FDA performed quite well. I am thinking particularly of penicillin-streptomycin combinations that patients — especially surgical patients — were given in one injection. This made for less discomfort for the patient, less demand on nurses' time, and few opportunities for dosage errors. To take such preparation off the market doesn't seem to be good medicine, unless actual usage showed a great deal of harm from the injection (rather than the proper use) of the combination.

The point that should be emphasized is that there are both rational and irrational combinations. The real question is, who should determine which is which? Obviously, the FDA must play a major role in making this determination. In fact, I don't think it can avoid taking the ultimate responsibility, but it should enlist the help of outside physicians and experts in assessing the evidence and in making the ultimate decision.

Maker of Medicine

W. Clarke Wescoe, M.D.
President
Winthrop Laboratories



If two medications are used effectively to treat a certain condition, and it is known that they are compatible, it clearly is useful and convenient to provide them in one dosage form. It would make no sense, in fact, if it would be pedantic, to insist they always be prescribed separately. To avoid the appearance of candor, the "expert" denies the combination because it is a fixed dosage form. When the "expert" invokes the concept of fixed dosage form he obscures the fact that single-ingredient pharmaceutical preparations are also fixed dosage forms. By a singular semantic exercise he imputes a pejorative meaning to the term "fixed dose" only when he uses it with respect to combinations. What is ignored is the simple fact that only in the worst of circumstances does any physician attempt to titrate an exact therapeutic response in his patient. It is quite possible that some aches and pains respond to 500 mg. of aspirin yet that fact does militate against the usefulness of being 650 mg. The other semantic ploy often called into play is to describe a combination product as rational or irrational. Take antibiotic mixtures, a source of much of the criticism generated against

combinations generally. Obviously, no one should be exposed willy-nilly to the potential side effects of two or three antibiotics when only one is needed. At the same time there are cases where it is prudent to prescribe more than one. The clinician is the judge in these circumstances, as he should be.

There is no clear definition of the word rational. Most persons, I suppose, would find it synonymous with reasonable, but in many circumstances it may best be defined as the opinion of those in power at the moment.

Other factors govern combination therapy, not the least of which has been its broad use by practicing physicians anxious to achieve convenience in prescribing, to reduce medication error, and to save money for their patients. Combinations clearly have met the test on all three counts.

I have been impressed by studies showing that the rate of error climbs markedly with the number of medications to be taken, even with sophisticated patients. When medically justified, therefore, this factor alone supports the logic of combination therapy.

The cost argument for combinations appears to be irrefutable. In 1971, R. A. Gosselin studied the 71 combination products (excluding oral contraceptives) among the 200 most prescribed drugs. The study found that if all 71 products were discontinued, and if each ingredient in these combinations were prescribed separately, the price of medicines to patients would jump by \$443.2 million on a national basis! At a time when the cost of medical care is under so much fire, it would be nonsensical to boost costs without clearly irre-

futable medical reasons.

The part played by government on this question, of course, is fundamental. The FDA should play a role in determining which combinations are reasonable. That role, as defined by law and regulation, is to ensure that any medication on the market is safe and effective in line with its label claims. Certainly combinations are entitled to as much consideration as single entities—neither more nor less. So long as the addition of one drug to another does not make either less safe, or less effective, so long as they are compatible in a formulation, we have a reasonable product. It makes no sense to recommend the use of two products for certain conditions and to deny their being combined in a single form. An unhappy side effect of the problem concerns the efficacy panel discussions of many products submitted for review. The term "effective, but" has been freely interpreted to mean "ineffective" in toto, regardless of the merit of the individual drugs. This interpretation has placed numerous useful combination products in needless jeopardy.

In reading the actual reports of the review panels, it seems clear that some of the ratings were based less on scientific research and clinical observation than on the "informed" opinions of the panelists. These "informed" opinions were accepted at face value, while

the "informed" opinions of others who had used the products were rejected. All of this put combination products into a sort of scientific never-never land.

It should be kept in mind by all, government as well as others involved in our health care system, that advances in therapy are seldom made in leaps and bounds but rather by small painstaking steps—and that some of these steps have resulted from research in combination drugs as well as with single entities. Given the near-infinite biologic variation in patient response, this is hardly surprising to clinicians. It should not be to regulatory agencies either.

In the end, the practicing physician is in the best position to decide if a particular combination makes sense. Such a decision should not be made exclusively by those whose responsibility for continuing clinical care is limited. Clinicians are the best judges of efficacy because the ultimate proof of any product's effectiveness is acceptance by physicians who have observed its actions in patients over time. The corollary statement may be made about over-the-counter medicines, which would not long survive if they failed to afford the relief the user anticipates. That the antihistamine in a "cold" remedy may not *always* be necessary is no reason to proscribe the combination generally.

Opinion & Dialogue

What is your opinion, doctor?

We would welcome your comments.



The Pharmaceutical Manufacturers Association
1155 Fifteenth Street, N.W., Washington, D.C. 20005



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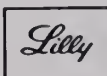
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Female Urology—Its Relation To Obstetrics Gynecology And Abdominal Surgery

By

Gilbert F. Douglas, M. D.

F.A.C.S., F.I.C.S., D.A.B., F.A.C.O.G., F.A.S.S.S.

Birmingham, Alabama

LIFE AND ART

LIFE IS SHORT, AND THE ART LONG: THE OCCASION FLEETING; EXPERIENCE FALLACIOUS, AND JUDGEMENT DIFFICULT. THE PHYSICIAN MUST NOT ONLY BE PREPARED TO DO WHAT IS RIGHT HIMSELF, BUT ALSO TO MAKE THE PATIENT, THE ATTENDANTS, AND THE EXTERNALS CO-OPERATIVE—Hippocrates.

As a gynecologist, I am discussing this paper probably more from the urological complications with which we have to deal in gynecology and conditions primarily related to urology.

All abdominal and urological conditions in the female should be considered as a part of gynecology. The gynecologist should have a thorough knowledge of urology to be most efficient.

Women with pus in the urine are often diagnosed as having cystitis. They are given bladder irrigation, cystoscopies and so forth when the main symptom is due to a gynecological condition.

This paper was read before the Pan-American Medical Association at Miami Beach, Florida, on November 21, 1972. (Department of OB & GYN.)

The cervix is closely related to the floor of the bladder. It is easy to see why chronic cervicitis would produce trigonitis and urethritis with irritability of the bladder and so forth. Urinary symptoms may be caused by mechanical pressure of large uterine tumors, ovarian tumors, cysts, etc.

No thorough gynecological examination is complete without a careful urine examination. This should include albumin, sugar, indican, acetone, diacetic acid, pus, blood, casts, kidney function, blood chemistry, etc.

There are a host of minor lesions and bladder disturbances, which however, play a major role in the discomfort and unhappiness complained of by gynecological patients.

Among the recognized factors in the genesis of urinary symptoms are the local atrophy, the increased sensitivity to moistening urine, and a lower threshold of the vasomotor and sympathetic systems.

Experience seems to teach one so many peculiarities about dysmenorrhea, that depends upon a ureteral stricture, that there is rarely an excuse for overlooking same. Essential dysmenorrhea, dysmenorrhea originating from pelvic disorders outside

the uterus, from uterine tumors or misplacements, etc.

When it is uncertain how much the genital disorder is contributing to the patient's discomforts, the only rational procedure is to care for this lesion first and await results, knowing that the operation can be done later if necessary.

There are often associated gastrointestinal symptoms, varying slightly from accumulation of gas to severe nausea and vomiting, diarrhea and attacks of mucous colitis.

Dysmenorrhea is ureteral rather than of genital origin at times and the ureters will be most sensitive to pressure over their course through the broad ligament.

In many operations the ureter is tied, yet convalescence is uneventful and any symptom produced by the ligation are easily obscured by other post-operative symptoms; thus the unilateral ligation goes unrecognized.

²The suppression of urine has been given as the cause of death following pelvic operations when it is actually due to ureteral ligations.

Pyelitis is one of the commonest symptoms in pregnancy and the puerperium.

All patients who have had irradiation of the pelvic organs should first have a thorough cystoscopic study to determine whether or not ureteral strictures and damaged kidneys may already exist. Each patient who is subjected to irradiation should be followed carefully in the early months after the treatment with frequent ureteral dilatations if necessary.

It would seem possible that the urinary tract changes could be brought by two hormones, the muscular hypertrophy and vascular changes being dependent upon the growth principle estrin, and the increasing size of the ureter due to the relaxation influence of Prolan B.

The urinary tract may become involved by three routes of infection—the hematogenous,



Fig. 1

F. Age-47. CC: Pain about left breast, back-ache, pain when voiding, leg ache. Diagnosis: Pain, clubbing in left calyces. (Mrs. E. S.)

the lymphatic and the ascending. The first two being the most likely pathways. Each theory has its strong supporters. ³Everett believes that the majority of the opinions are that the organisms are carried to the kidneys by way of the blood stream.

For a hundred years, dilatation of the kidney pelvis and ureter during pregnancy has been known. ⁴Many theories have been advanced as to its etiology. Pressure of the enlarging uterus on the ureter as it crosses the pelvic brim seems a plausible explanation, but alone has many weak points.

A varying degree of dilatation of the ureters and kidney pelvis occurs in at least 80 per cent of all pregnant women. The right side is more often affected than the left. This is probably due to the fact that the right ureter crosses the iliac vessel at almost a right angle. The left side is also protected by the sigmoid.

The dilatation starts earlier in multiparas



Fig. 2

F. Age-42. CC: Chronic pain over right side, abdomen and over ureters and kidney regions. Swelling of face, feet and hands. Irritation about the body. Diagnosis: Hydro-nephrosis, dilated ureters, deformed kidney pelves.
(Mrs. B. J.)

than in primiparas and may often be seen. The ureters usually appear elongated, tortuous and kinked. Therefore, there is bilateral displacement of the ureters in the lumbar region.

The great majority of women with pregnancy toxemias, toxic vomiting, and eclampsia show a marked dilatation of their upper urinary tracts. Some believe that the reabsorption of urinary waste products in these cases is responsible for such toxic states.

Common symptoms are pain in the pelvis or lower abdomen, backache, and bladder discomfort. Frequently there is dysuria, nausea, indigestion, irritability and nervousness as symptoms. Pain may be dull or acute. Exacerbations, premenstrual and during the flow are common.

Lesions of the female generative organs



Fig. 3

F. Age-43. CC: Pain over renal regions, back, chest, legs and head. Also has pains in her legs with her periods. Diagnosis: Hydro-nephrosis—bilateral, dilated ureters, stricture of ureters (contrast media in spinal canal where she had myelogram).

(Mrs. D. S.)

are often responsible for symptoms suggestive of urinary tract pathology.

"Pathologic conditions of the kidneys, bladder, ureters and urethra may at times simulate the various lesions of the uterus, tubes and ovaries. These facts are more readily appreciated when the close proximity of the urethra, bladder and lower third of the ureters to the female pelvic organs and the intimate arterial, venous, lymphatic and nerve relationship are taken into consideration.

Frequent urination was the most common urologic symptom due to gynecologic pathology. Twenty-two per cent of the urologic cases had concomitant gynecologic symptoms or pathology.

Mistaken diagnosis are more common in

women and many have undergone prolonged and useless treatment with tampons and pessaries as well as numerous unnecessary operations because of incomplete investigation of the urinary as well as the generative tracts. The following facts are of diagnostic significance: Hydronephrosis, pyelonephritis, cystitis, ureteral strictures, interstitial cystitis, and incontinence of urine.

Caruncles are often the sole etiological factor in the production in the symptoms suggestive of generative tract pathology.

Salpingitis is the most common gynecologic condition requiring differentiation from pathology in the urinary tract.

The infected cervix, so common in women, is probably a more important etiologic factor in urinary tract infection than is generally appreciated.

Four-fifths of the ectopic kidneys are found in women. They are frequently mistaken for tumors of the female pelvic organs. Pain or a sensation of pressure is often present and many occur without subjective symptoms.

Almost every woman suffers from bladder disturbances at some period of her life.

A distended bladder has occasionally been mistaken for a pelvic tumor, most often for an ovarian cyst.

Urologists and gynecologists are gradually awakening to a realization of the frequency of strictures of the female urethra as important etiologic factors in the presence of urinary disturbances and infections of the upper urinary tract.

It is advantageous for the urologist to have had some training in gynecology and to be conversant with all of the pathologic conditions of the abdomen and pelvis.

Because of frequent similarity of symptoms as well as the not uncommon association of lesions of the female urinary and generative organs examination of both tracts is almost always indicated, particularly before surgical procedures. A vaginal examination will reveal many of the pathologic conditions of

the urethra, bladder and lower third of the ureters, as well as those of the uterus, tubes, ovaries and broad ligament.

Stark found in a series of gynecologic patients, that 35 per cent complained of bladder irritability.

The shortness of the urethra, together with its close proximity to the vagina and rectum, has a direct bearing on the greater frequency of the non-gonorrheal urethritis and upper urinary tract infections in the female. Urethritis, which is associated with trigonitis, is responsible for the majority of cases of frequency of urination, the most common urinary disturbance in this sex.

Pathologic conditions of the female generative organs which are frequently responsible for urinary tract symptoms are displacement of the uterus, tumors of the uterus, metritis, cervicitis, endocervicitis, parametritis, salpingitis, ectopic pregnancy



Fig. 4

F. Age-55. CC: Spotting and discharge odor, dizziness, nervousness, and poor sleep. Diagnosis: Double ureter (left), hydronephrosis, deformed right ureter, stricture of right ureter near kidney. (Mrs. C. A.)

ovaritis, tumors of the ovary, tumors and inflammatory processes in the broad ligament and vaginitis. It is not uncommon for patients with pelvic inflammatory conditions to complain of pain as high as the kidney region, notwithstanding the absence of urinary tract disease.

Pyelitis was found during pregnancy in 39, or a little less than one per cent of 3,642, consecutive cases seen in the obstetric department of Stanford University School of Medicine.⁸

In the presence of residual urine during pregnancy or the puerperium the bladder should be irrigated with silver nitrate or other antiseptic solutions until the infection has disappeared.

Tuberculosis of the kidney during pregnancy is surprisingly uncommon, and few cases have been reported in the literature.

In gynecology, parametrial abscess perforating into the bladder frequently requires cystoscopy to establish the diagnosis and prognosis. In cancer of the cervix, cystoscopy with catheterization of the ureters is indispensable in order to avoid errors as to the extent of the lesion and the prognosis, and to determine the choice of treatment. "The very first sign that the tumor has involved, if any very superficially, the wall of the bladder is the bulbous edema of the mucous membrane.

Injuries of the ureter must be mentioned in connection with operations, especially abdominal and total hysterectomy. If the ureter has been cut not too far from the bladder, implantation into the bladder usually proves successful. However, if the injury has been overlooked or implantation is impossible, the best one can hope for is a proper anastomosis. The same holds true for ureteral fistulas which develop during the second week following operations as a result of blunt injury during operation, or from slow abrasion by a suture leading to a decubitus in the wall of the ureter.

Experience has shown that a secondary ureteral fistula may close after "autoneph-



Fig. 5

F. Age-23. CC: Abdominal pain, low blood counts, backache. Diagnosis: Hydronephrosis, bilateral clubbing calyces.

(Mrs. E. M.)

rectomy," or after spontaneous healing of the fistula as long as three months after operation.

It is estimated that among gynecologists that chronic cervicitis is due to a persistent infection in the depths of the compound racemose glands which is characterized pathologically by a periglandular round cell infiltration. The cervix is prone to infection because it is lacerated during labor. The crypts and lacunae of the mucous membrane afford a protection for the invading organism, and in these areas the gonococci and other bacteria may lie dormant for long periods of time.

Other lesions of the cervix should be ruled out before coagulation, such as syphilis, tuberculosis, early carcinoma and pinpoint leucoplakias. Because of the rich supply of lymphatics capable of producing such associated lesions as metritis, parametritis, and uterosacral cellulitis, it is advisable also to rule out any chronic inflammatory residual



Fig. 6

F. Diagnosis: Double ureters, stricture of ureters (double).

(Mrs. L. L.)

pelvic pathology. Coagulation of the cervix should never be done in the presence of an acute or subacute inflammatory lesion of the internal or external generative organs.

Where the cervix has an edematous and an acutely inflamed appearance associated with marked lacerations, it is best to treat it first by topical applications of ten per cent tannic acid and glycerine into the cervical canal or some other more modern method, supplemented daily by douche. This will shrink the cervix materially and reduce the activity of the chronic inflammatory process.

¹⁰Herrold, Ewert and Maryan found in their clinical results that treatment of the cervix as described gives satisfactory relief of symptoms referable to the urinary tract in approximately two-thirds of the patients.

It has been emphasized by others that the cervix frequently is a focus of systemic infection, particularly arthritis and iritis. One arthritic patient in their series was

relieved of all symptoms within four weeks after coagulation of the cervix.

I had a case of arthritis in a young woman about 20 years of age with cervicitis that cleared within a few weeks after cervix was cleared.

It is well known that the incidence of interstitial cystitis is higher in women than in men. One patient of their series with an early interstitial cystitis had definite improvement following coagulation of the cervix.

In a series of 32 patients with irritable bladder there was complete relief or marked improvement in two-thirds of the series following coagulation of the cervix.

¹¹During the past few years urethral pathology in the woman has become an open although as yet an incompletely read book, because routinely the urethra is examined during all cystoscopies, or is this wishful thinking?

The anterior two-thirds of the urethra is lined by aquamous epithelium similar to the vaginal epithelium. The posterior third gradually assumes the characterization of the transitional epithelium of the bladder.

Glands, where they exist, are lined by columnar epithelium. There is unanimity of opinion that the Skene's glands are always present and are the homologue of the prostatic glands of the male.

Urethral caruncle is exceedingly uncommon or rather infrequent, depending entirely upon the interpretation of the individual making the examination.

Injuries observed at operation should be repaired immediately. In cases where bladder injuries are repaired, a retention catheter should be left in the bladder for a week or 12 days.

If after the operation, it is discovered that a ureter has been cut and there is leakage of urine, a nephrostomy could be done without delay, rather than opening the abdomen again. In old injuries of the ureter, a suitable procedure must be adopted to each case.

Greater care and attention should be directed to preliminary investigation of the genito-urinary tract. Ureter catheterization is definitely indicated before some operations.

Often we examine patients who complain of frequency of urination and find no pathology in the urinary tract, but some other condition such as a fibroid of the lower anterior wall of the uterus or of the cervix jutting into the posterior wall of the bladder; a retroverted uterus with its cervix joining against the bladder; thus irritating the trigone; a pathological anteflexion of the uterus with the fundus jutting into the bladder; a carcinoma of the cervix elevating and indenting the bladder; or a mass in the pouch of Douglas which presses the uterus forward into the bladder, thus elevating the trigone. This deviation of the trigone is important from a pathological standpoint. Just as important is the depression of the trigone. After nearly every delivery there is some depression of the anterior vaginal wall, which increases with the number of deliveries and with age and which gives rise to a cystocele. This condition cannot be cured by medication if the cause of the pathology is left.

Pain in the kidney region may be a referred pain from adnexal disease and the adnexal disease may be overlooked unless a pelvic examination is made.¹²

Certain changes take place in the bladder at the menopause. There is atrophy and loss of tone in the sphincter, and if the patient has had many deliveries and has a cystocele dragging down on the sphincter she is apt to lose a few drops of urine when the abdominal pressure is increased. The mucous membrane of the trigone and that surrounding the trigone becomes atrophic and more grayish in color.

Many patients present themselves with urologic symptoms when their condition is a gynecological one, and vice versa. Furthermore, a urological condition may have its primary etiology in the genital tract. The



Fig. 7

F. Age: 38. Diagnosis: Hydronephrosis, dilated ureters. (patient of Dr. George C. Douglas). (Mrs. M. S.)

reverse of this is also true. We should have this close relationship in mind in making a urological or a gynecological examination.

Every urologist has had women patients with urinary disturbances that were perplexing as to the cause of the symptoms. Therefore, if it can be established that cervicitis will frequently cause vesical and urethral disturbances, we shall be in a better position to relieve many of the women now suffering from that condition. We do not, however, intend to convey the idea that all vesical symptoms in women are brought on by cervicitis.

A great per cent of cases of cervicitis are relieved and symptoms pertaining thereto by the use of the cautery in some form, however, possibly 30 per cent of the cases which are not relieved in this may get complete relief when the Sturmdorf type operation is done on the cervix.¹³

Far too many women suffer abdominal

and pelvic operations in the hope of relieving some vague symptom only to find that the symptoms remain, to the embarrassment of the surgeon and the annoyance of the patient, leaving the women to feel that she is one of those individuals who must be a martyr to her sex and suffer for the rest of her life.

During routine examination, the gynecologist has an opportunity to note the condition of the external genitalia and evidence of inflammation of Bartholin's or Skene's glands, presence of urethral caruncle, and whether or not there is evidence of urethral thickening or urethral discharge. The presence of prolapse of the urethra, urethrocele, diverticulum of the urethra, peri-urethral and sub-urethral abscesses are easily noted in his examination. He further has an opportunity to note the pelvic support, the presence of cystocele, evidence of vaginal discharge and inflammation. His examination also reveals the condition of the cervix; the position of the uterus; prolapse of the pelvic organs, if present, and the condition of the adnexae.

Stevens and Henderson¹⁴ reported that of 8,302 patients admitted to the Women's Clinic at Stanford University School of Medicine, 824 or 9.9 per cent, were referred to urology because of urinary symptoms. Patients with gonorrhea were excluded. Of this group of 824 cases, urinary symptoms were found to be due in 27 per cent of the cases to pathological and physiological changes in the generative organs.

Since the majority of the urinary tract symptoms to which the gynecologists has to be alert are those in which there is a clear urine and a lack of urethral discharge, he will keep in mind the possibility of urethritis caused by cervicitis and the congestion produced by chronic sexual dissatisfaction, masturbation, and the so-called erotic urethritis, as has been described by Beech. Foreign bodies inserted into the urethra for erotic stimulation may slip into the bladder and produce symptoms.

¹⁵Polak maintains that fully 85 per cent of all women, single or married, have infected cervixes. ¹⁶Fulkerson reviewed 6,493 gynecologic records of Cornell University Medical School and found a diagnosis of cervicitis or endocervicitis in 33.16 per cent.

Chronic cervicitis is the persistent infection in the depths of the compound racemose glands. Coagulation of the cervical canal will clear up the majority of the cases. Certain cases, especially those associated with lacerations, are best treated by conization or plastic operation.

The gynecologist often sees patients in the early stages of poor pelvic support and procidentia when an early repair will prevent the development of cystoceles, hydroureters, and hydronephrosis with their concomitant infections. The resultant urinary damage explains some of the unhappy results following late repair of procidentia.¹⁷

The findings on pelvic examination may be sufficient to warrant conclusion that the symptoms are explained solely by some pelvic lesion, while in reality this is of minor importance. Routine use of the cystoscope in all cases presenting bladder symptoms will soon prove that such complications are by no means rare.

Anatomically the bladder in the female is a thinner walled organ than the male bladder. Its capacity somewhat less than the male is estimated at 250 to 300 CC.¹⁸

A summation of investigations indicates that the most serious results of trauma to the major portion of the bladder—the dome—is overdistensibility. The serious damage which these bladders suffer is destructive injuries to the trigonal muscle, either at its urethral or trigonal ends and to the sphincter muscle of the urethra.

In many clinics gynecologists carry out cystoscopic procedures with thoroughness, accuracy and a background of wide information pertaining to both branches of surgery. In other clinics the urological study is distinctly secondary to the gynecological

aspects of the problem, if one is to judge by the methods employed. There is abundant evidence that many factors involved in these disabilities, consequently are applying somewhat blindly, a set of standard operations to conditions which are by no means standardized.

The relative frequency to urinary symptoms in gynecological cases is indicated by several observers to be about 30 per cent.

Radiological study is not itself adequate diagnosis of urethral and bladder defects due to birth canal injury. Local examination and cystoscopy must be added.

Urethrography is preferable to urethrocscopy in estimating the nature of urethral damage and disease.

Cystoscopy is preferable to cystography in diagnosis of the type of cystoscele present. Cystography gives important evidence regarding decensus, pelvix tumor and abdominal bladder configuration which is less easily recognized by cystoscopy.

Most patients who consent to an elective gynecological operation or submit to palliative measures directed to the female organs have a right to expect that such measures will either relieve or cure the symptoms for which these procedures are advised.

Lesions of the gastrointestinal tract probably constitute the largest group that calls for differentiation and of these, appendicitis heads the list. The differentiation between acute appendicitis and acute pyelitis is difficult, especially if the patient with an acute disease of the appendix has some red blood cells and perhaps a few pus cells in the urine and it is difficult to obtain an accurate history.

If a woman who has previously had attacks of pyelitis during one or more pregnancies suddenly develops an attack of appendicitis it is easy to understand why the attack of appendicitis may be overlooked and the clinical picture attributed to a lighting up of an old infection in the kidney. If in this

type case after due deliberation and consultation, it is not possible to make the differentiation, one should give the patient the benefit of the doubt and operate on her, rather than run the danger of overlooking an acute appendix and having the patient die of generalized peritonitis.

The important anatomical divisions of the bladder are the urethra, vesicle neck, ureteral openings, interureteric ridge, trigone and the roof. The examiner must be familiar with the above landmarks in order to do effective cystoscopies.

Cystoscopy is a definite aid in gynecological diagnosis and treatment.

Pyelography is one of the most important parts of cystoscopy.

Having recognized by these or other procedures that a ureter has been ligated, we have four possible courses open to us:¹⁹

1. We may re-operate to divide the ligature an exceedingly difficult procedure indeed.
2. We may leave things as they are (if the kidney appears adequate.)
3. Or we may do a nephrostomy as a temporary or permanent expedient.
4. Cystoscopy pass bougie or catheter to dilate ureter at point of ligation.

CONCLUSION

1. In making a gynecological diagnosis urinary pathology should always be considered.
2. Many pelvic or abdominal operations are done on a gynecological basis where there is a stricture of the ureter or other urinary infection.
3. Urinary tract infection may be involved from three routes; the hematogenous, the lymphatic and the ascending.
4. Pyelitis of pregnancy is quite frequent and we should always be aware of the physiologic changes which take place in

the ureters incident to the hormonal stimulation due to pregnancy.

5. Salpingitis is the most common gynecological condition requiring differentiation of pathology in the urinary tract.
6. Careful search should be made for stricture of the urethra in making a gynecological diagnosis.
7. Injury or ligation to the ureters is much more common than suspected unless both have been injured or ligated.
8. Many cases of definite pathology of the urinary system is overlooked in having negative pus or blood cells on first examination. No case should be excluded as clear without having cystoscopy with ureteral catheterization.
9. The gynecologist often sees the patient with poor pelvic support and proclivencia, when an early repair would prevent cystoceles with their concomitant infections.
10. All gynecologists should have urology training to be able to differentiate his findings and should be trained to do urologic treatments unless he has a close association with a good urologist.

"I want to dedicate this paper on 'FEMALE UROLOGY—ITS RELATION TO OBSTETRICS, GYNECOLOGY AND ABDOMINAL SURGERY' to Doctor Joseph J. Eller, New York City dermatologist. He is director-general of the Pan-American Medical Association and is doing an excellent job with it. They started off with six sections forty-seven years ago and now have a total of fifty-two. They will soon celebrate their fiftieth anniversary."

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The Controversy Over End Expiratory Positive Pressure Versus Negative Expiratory Phase

D. S. Tysinger, Jr., M. D.

Dothan, Alabama

The individual without very bad problems is ventilated fairly easily. He pulls his chest cage out normally producing subambient alveolar pressures and with the addition of not too high positive pressures at the mouth, ventilation occurs fairly normally.

The problem of ventilating is simply mixing the tidal volume breathed with the functional residual capacity. With a small functional residual capacity a tidal volume of 500 ml. is more effective in eliminating CO_2 and elevating PO_2 , than it is with a high functional residual capacity.

End expiratory positive pressure has limited application to poorly ventilated stiff lungs. How do they develop?

When a person is not breathing well (not moving the chest cage satisfactorily) alveolar hypoventilation starts. PH gets acidic, PCO_2 goes up and PO_2 goes down. In the present state of our ignorance the learned physician puts down a nasotracheal tube or puts in a tracheotomy tube, puts the patient on a respirator with much higher pressure than needed and the patient gets a little worse. Frantic to oxygenate and ventilate, he finally adds the new gimmick *end expiratory positive pressure*.

What has occurred is a simple straightforward comedy of errors. When the chest cage has to be pushed out by pressure from a machine, a tight airway has to be established. This airway has a flow rate resistance factor greater than the trachea since it is smaller. This usually amounts to a pressure of 5-10 cmH_2O just to ventilate the flow rate developed through the tube with no pressure

output just flow from the other end. In addition, instead of the simple 15 cmH_2O pressure to assure ventilation with the alveolar 5 cmH_2O subambient pressure, which occurs with normal chest cage movement, now the chest cage has to be pushed out by pressure in the bronchial tubes and alveolus. This is necessary if adequate volume is to be put in the lungs. Thus, 5 cmH_2O to ventilate the tube, 15 cmH_2O to ventilate and 15 cm to push out the chest cage adds up to 35 cmH_2O being developed on inspiration.

Several changes are occurring here. First, the increased pressure at the alveolar capillary area is like increased peripheral resistance and if pulmonary artery blood is to flow through the capillary during the inspiratory phase of breathing, the right heart must develop an increased pressure to cause flow. This it usually does (this, not a decrease in right heart output, is right heart strain.) Since this pressure is only present during inspiration, and since the increase in right heart output is continuous, there is increased hydrostatic pressure during the expiratory phase with fluid egress from the capillary to the alveolar interstitial area during expiration. This increases the alveolar capillary oxygen gradient and decreases capillary oxygen partial pressures. To compensate for the falling arterial oxygen partial pressures richer inspiratory mixtures are applied to the patient. These high inspiratory concentrations cause lymph stasis with further fluid collection and stiffness, paralyzes the ciliary-mucous escalator and as they get high cause pulmonary hemorrhages into the tissues. Thus, the lungs get stiffer and more pressure is used. This pres-

sure causes an increased output of anti-diuretic hormone with fluid holding and an output of aldosterone, with its associated problems. While all this is occurring there is also the problem of the pressure itself pinching the lungs against the inside of the chest cage and diaphragm with increased tissue histamine levels and edema. Thus, is produced the stiff noncompliant lungs which are so hard to ventilate.

Now that stiff lungs have been developed and high ventilating pressures are required, what? Due to the lungs being stiff a new resting chest cage level has been established with marked increase in functional residual capacity. The alveolar exchange is less effective due to the large dilutional factor. Thus, tidal volume is less effective. With poorer alveolar levels there is also a greater alveolar capillary gradient so that oxygenation is less efficient.

The pressure necessary to ventilate the trach tube at the flow rate of inspiration, and to push out the chest cage and then to ventilate is now high. At end inspiration this same high positive pressure is left to cause expiration. Since expiration is slower, it takes less pressure to ventilate the trach tube, leaving a greater alveolar mouth pressure difference. The bronchial tubes are reducing in cross sectional diameter and length with the high pressure for the volume flow, turbulence rapidly increases, this turbulence retards flow. With this resistance time is not sufficient for complete expiration due to the high pressure difference and turbulent slow flow. The next inspiration begins before expiration is complete. Thus, there is further increase in functional residual volume and further decrease in effectiveness of tidal volume to ventilate adequately.

Since too many would-be experts have made a name and in some instances a living preaching the virtues of these pile driving piston pumps, to save face and not admit to swallowing a line, some method has to be developed to make them effective. The obvious one after being frantically over-

looked was finally adopted—end expiratory positive pressure.

The problem other than producing the stiff lung with too high inspiratory positive pressures combined with too high inspiratory oxygen concentrations was one of too great an alveolar mouth pressure difference on expiration.

By putting a flow resistance (retard cap) on the exhalation valve, and reducing the alveolar-mouth pressure difference, flow became less turbulent and expiration more complete and ventilation thus much improved. Isn't that simple? It also reduces the hydrostatic pressure alveolar pressure difference, and reduces the rate of fluid egress. It increases right heart strain and increases production of antidiuretic hormone and aldosterone. But don't forget it improves ventilation under these circumstances.

Up until mouth-mouth and hand bag resuscitation, all attempts manually (and they were effective) worked by reducing the functional residual volume 300-400 cc and allowing the chest cage to go back to the normal resting position. The aim is to produce a tidal volume that when diluted with functional residual volume will give sufficient alveolar concentrations to cause satisfactory blood gas levels. By reducing the functional residual volume and using less positive pressure, the tidal volume is as great or greater than with high positive pressures. A subambient pressure of 3-5cm properly applied at the mouth will reduce the functional residual volume and with a 20cmH₂O positive pressure give a greater volume exchange. This makes for a much more effective ventilating program even with pulmonary contusion or hematoma. Interestingly enough a negative expiratory phase will counter the positive inspiration phase and (1) support blood pressure, (2) stop the antidiuretic hormone production and aldosterone production, (3) not put strain on the right heart and (4) not start

(Continued on Page 497)

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Dosage forms: *Tablets*, 2.5 mg. of diphenoxylate HCl with 0.025 mg. of atropine sulfate. *Liquid*, 2.5 mg. of diphenoxylate HCl and 0.025 mg. of atropine sulfate per 5 ml. A plastic dropper calibrated in increments of 1/2 ml. (total capacity, 2 ml.) accompanies each 2-oz. bottle of Lomotil liquid.



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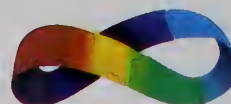
Diagnosis: Severe pyoderma, left hand.

Culture: *Staphylococcus aureus*, coagulase positive and sensitive to MINOCIN.

Temperature: 102° F

Therapy: MINOCIN Minocycline HCl Capsules, 100 mg: 200 mg *stat*, 100 mg every 12 hours. Medication began 9/7/71. By fourth day, temperature was normal and pustular lesions considerably improved. Last dose taken 9/14/71.

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Minocycline is a tetracycline with activity against a wide range of gram-negative and gram-positive organisms.

Contraindications: Hypersensitivity to any tetracycline.

Warnings: The use of tetracyclines during tooth development (last half of pregnancy, infancy and childhood to the age of 8 years) may cause permanent discoloration of the teeth (yellow-gray-brown). This is more common during long-term use but has been observed following repeated short-term courses. Enamel hypoplasia has also been reported. Tetracyclines, therefore, should not be used in this age group unless other drugs are not likely to be effective or are contraindicated. In renal impairment, usual doses may lead to excessive accumulation and liver toxicity. Under such conditions, use lower doses, and, in prolonged therapy, determine serum levels. Photosensitivity manifested by an exaggerated sunburn reaction has been observed in some individuals taking tetracyclines. Advise patients apt to be exposed to direct sunlight or ultraviolet light that such reaction can occur, and discontinue treatment at first evidence of skin erythema. Studies to date indicate that photosensitivity does not occur with MINOCIN Minocycline HCl. In patients with significantly impaired renal function, the antianabolic action of tetracycline may cause an increase in BUN, leading to azotemia, hyperphosphatemia, and acidosis. Pregnancy: In animal studies, tetracyclines cross the placenta, are found in fetal tissues, and can have toxic effects on the developing fetus (often related to retardation of skeletal development). Embryotoxicity has been noted in animals treated early in pregnancy. Safety of use during human pregnancy has not been established. **Newborns, infants and children:** All tetracyclines form a stable calcium complex in any bone-forming tissue. Prematures, given oral doses of 25 mg./kg. every 6 hours, demonstrated a decrease in fibula growth rate, reversible when drug was discontinued. Tetracyclines are present in the milk of lactating women who are taking a drug of this class. Safe

use has not been established in children under 13.

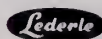
Precautions: Use may result in overgrowth of nonsusceptible organisms, including fungi. If superinfection occurs, institute appropriate therapy. In venereal diseases when coexistent syphilis is suspected, darkfield examination should be done before treatment is started and blood serology repeated monthly for at least four months. Patients on anticoagulant therapy may require downward adjustment of such dosage. Test for organ system dysfunction (e.g., renal, hepatic and hemopoietic) in long-term use. Treat all Group A beta hemolytic streptococcal infections for at least 10 days. Avoid giving tetracycline in conjunction with penicillin.

Adverse Reactions: (Common to all tetracyclines, including MINOCIN) GI: (with both oral and parenteral use): anorexia, nausea, light-headedness, vomiting, diarrhea, glossitis, dysphagia, enterocolitis, inflammatory lesions (with monilial overgrowth) in anogenital region. **Skin:** maculopapular and erythematous rashes. Exfoliative dermatitis (uncommon). Photosensitivity is discussed above ("Warnings"). **Renal toxicity:** rise in BUN, dose-related (see "Warnings"). **Hypersensitivity reactions:** urticaria, angioneurotic edema, anaphylaxis, anaphylactoid purpura, pericarditis, exacerbation of systemic lupus erythematosus. When given in high doses, tetracyclines may produce brown-black microscopic discoloration of thyroid glands; no abnormalities of thyroid function studies are known to occur. In young infants, bulging fontanels have been reported following full therapeutic dosage, disappearing rapidly when drug was discontinued. **Blood:** hemolytic anemia, thrombocytopenia, neutropenia, eosinophilia.

NOTE: Concomitant therapy: Antacids containing aluminum, calcium, or magnesium impair absorption; do not give to patients taking oral minocycline. Studies to date indicate that MINOCIN is not notably influenced by foods and dairy products.

*Indicated in infections due to susceptible organisms. Culture and sensitivity testing recommended. Tetracyclines are not the drugs of choice in the treatment of any staphylococcal infection.

†Case Report, Clinical Investigation Department, Lederle Laboratories



LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York 10965

436-2

THE CONTROVERSY

(Continued from Page 492)

the spiraling events that lead to stiff non-compliant lungs.

Everyone gets upset over the mention of a negative expiratory phase. Continuous negative pressure has been shown to produce fluid, and hemorrhage. This is a pressure of -5cm on expiration to -20-30cm on inspiration during continuous negative pressure breathing. This is not the case when breathing positive inspiration and negative expiration of -3 to -5cmH₂O. The other problem discussed is trapping, which in severe obstructive disease may happen to some extent, but not to the extent that Bernoulli effect collapses and traps with the high turbulent flows of high inspiratory pressures. The individual sitting with only his head out of water is breathing at a negative pressure of 10-15cmH₂O, the same as if it were applied at the mouth. It is not so dangerous, it is just not too well understood. The chest cage and diaphragm keep the interstitial area more subambient than the alveolus.

Sighing must be done in both methods. More often in high positive pressures where tissue fluids with high surface tensions are more likely to get into the alveolus and cause alveolar collapse.

Ultrasonics To Remove Kidney Stones

A University of Virginia researcher has developed an ultrasonic probe which may make surgery to remove painful kidney stones unnecessary, according to the National Society for Medical Research.

Dr. Stuart S. Howards, assistant professor of urology at the UV School of Medicine, has used a miniature probe that transmits high-frequency sound waves to break up kidney stones in animals. Once it has been perfected, the probe may be used in humans to crumble stones which would then be

Internists and General Physicians needed in Selma, Alabama. Modern, J. C. A. H. approved hospital in community. To arrange for a visit and assistance in getting your practice started, contact: E. J. Ryan, Jr., Director, Medical Relations, Hospital Corporation of America, P. O. Box 550, Nashville, Tennessee 37203.

passed naturally through the urinary tract. This would avoid surgery which normally requires about 10 days of hospitalization and six weeks of convalescence.

Animal experiments will continue until the scientists are absolutely certain there will be no side effects if the probe is used in humans. To-date, they have found that using the ultrasonic probe produces fewer changes in surrounding tissue than does surgery. The UV work has been carried out in collaboration with engineers at the Massachusetts Institute of Technology.

There is one thing worse than the income tax—not earning enough to owe one.

* * *

If I am not for myself, who will be? But if I am only for myself, what am I?—Hillel

* * *

There's nothing wrong about a political joke, as long as he isn't elected.



The Effect Of Malpractice On The Cost Of Medical Care

Editors Note: The following address was presented to the Task Force on Cost of Medical Care of the Alabama Health Study Commission by E. Vernon Stabler, M. D., Greenville, on November 8, 1972.

The Alabama Medical Association has made an exhaustive study into the rates of mal-practice and the causes of their increase. The insurance committee of this association is composed of Dr. C. A. Lightcap of Mobile, Dr. N. E. Cowart of Huntsville, Dr. B. M. Carraway of Birmingham, Dr. D. E. Dunn, Jr. of Montgomery and Dr. J. M. Morgan of Birmingham, L. P. Patterson executive director of the Medical Association State of Alabama the insurance committee's report to the Board of Censors and the subsequent adoption of a new approach to the mal-practice problem in this state.

Their investigation stemmed from the constant request and demand by the various insurance companies for raises in mal-practice insurance rates over the past several years. In one year alone a rate increase of 75% was allowed by the insurance commissioner,

only to have in less than 12 months additional request for 30% raise.

I have attached to this report a table showing the rates in Alabama as compared to surrounding states. Also a composite table showing the states with higher rates than ours in the United States. The table also reflects the national averages. These reflect some fantastic facts in comparison to what extremes it is possible to go when there are uncontrolled legal excursions into the earnings of the medical profession and the health care dollar. Especially when this is allowed to go unbridled such as in Dade County Florida and in the State of California. It is also interesting to note that once the health field including the doctors become better organized in this field and can compile some available statistic that the rates can be lower even in the more abused states such as New York.

There is no necessity for me to point out the trite statement that all medical costs are passed on to the public.

At our first meeting we had a very indepth
(Continued on Page 500)

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(Continued from Page 498)

study presented to this group on "Some Aspects Of the Rising Cost of Mal-Practice Insurance As Effects On The Cost Of Health Care". This was presented by Herman Brehmer, Susan Chambers, Dave Jacocks, Tony Rose, Jim Mullins and John Vice. You each have a copy of this and it goes into detail on this subject. It not only was revealing but there are some very pertinent recommendations included in the study.

The Alabama Medical Association's answer to all of this is what is known as the Wausau Program. This is merely a program set up by doctors in the state to have some voice and control in mal-practice rates. At the time of the program organization Aetna was charging 50% above the state manual rate and there was a request pending for an additional 32% increase. USF&G was cancelling all of their policies, St. Paul would not write any doctors except the lowest two category risk leaving only Lloyd's of London for a sub-standard policy at increased rates.

It is interesting to note that after Employers of Wausau started implementing the Wausau Program the other insurance carriers apparently found that Alabama was not such a bad market and that they did not need all the rates they were asking. They withdrew their request for higher rates and launched a determined campaign to keep their present policyholders and write new accounts. In fact they are waging a campaign against the reliability of Employers of Wausau. Even sub-premiums were tailored to undercut the Wausau plan.

In Georgia, Tennessee, as well as in New York where the doctors have long been united in a similar program, premium rates are stabilized at a substantially lower figure than we have been paying in Alabama. As you can see from the tables attached, an example is Class III which is sort of a general surgeon classification. Alabama pays \$839, Mississippi \$210, Tennessee \$339 and Georgia \$476. North Carolina pays \$396, South Carolina \$352 and Florida pays \$1,111. The Dis-

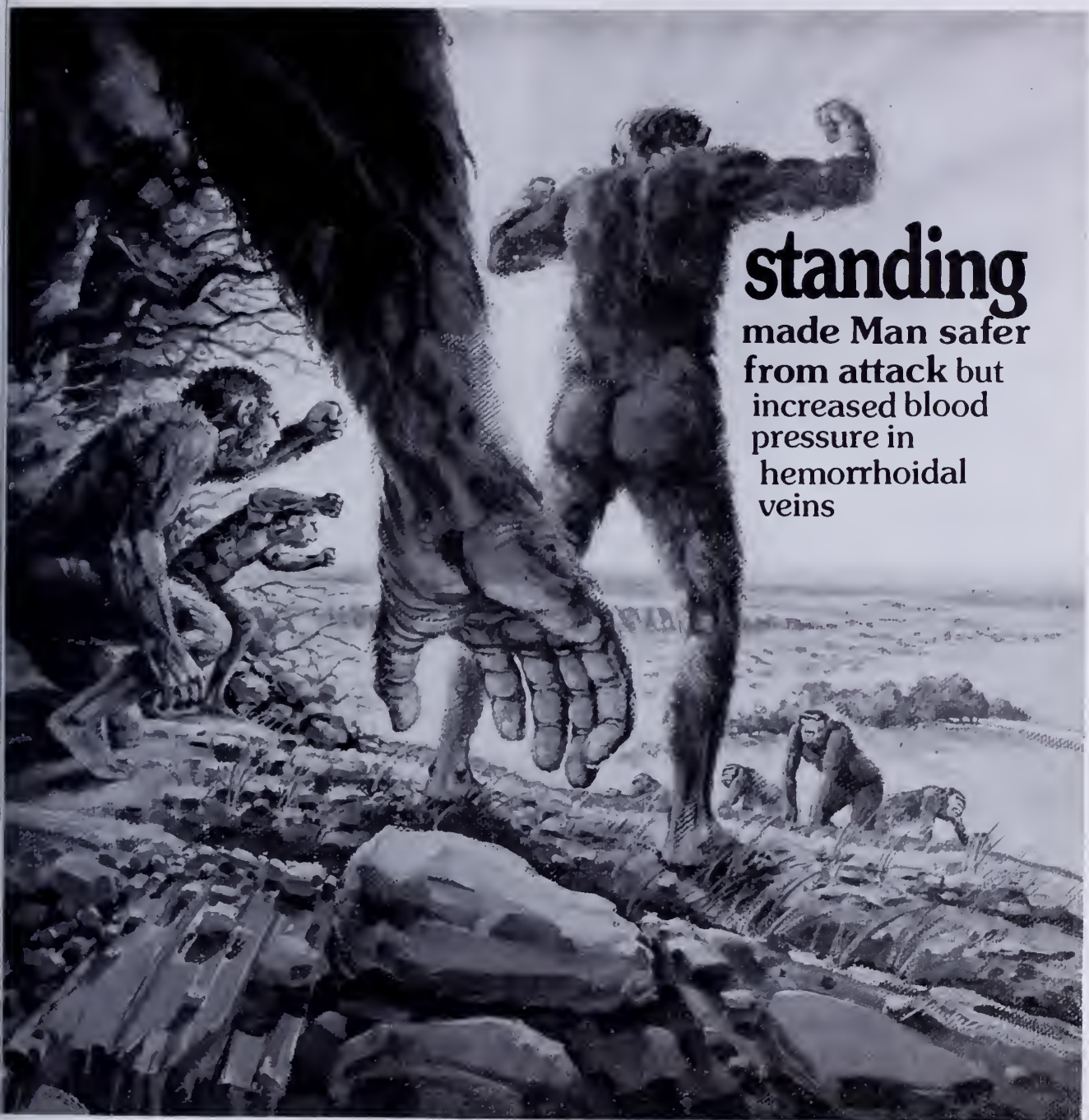
trict of Columbia pays \$1,350 and California \$3,470. The national average is \$1,093.

The conclusion reached by the report presented by Herman Brehmer, Susan Chambers, Dave Jacocks, Jim Mullins, Tony Rose and John Vice at our first meeting was that mal-practice problems have added to the cost of medicine in Alabama. More especially the point is that the threat of suit in mal-practice cases has added substantially. This has caused more frequent visits by the physician, more consultations, more tests, x-rays, etc. in the practice of preventative testing and treating.

This markedly added cost naturally comes under this discussion. How much has the patient benefited from the extensive preventative testing and to what extent would this eventually go?

I think it is perfectly obvious that extensive annual examination would prevent many deaths. Routine x-rays of the lungs seems natural as well as routine blood counts. Nonetheless to illustrate, Dr. Nakayama of Tokyo has done more cancer of the stomach than any person in the world and apparently rightly states that 20% of all deaths could be prevented if everyone had a gastroscopic examination done at periodic times. It is also obvious that under these circumstances a thorough gastroscopic by one specialist could be much better than a thorough one by another. This principle in preventative examination could be carried in minutia to a ludicrous point far beyond the possibilities of medicine today. Therefore the question comes down to what is a practical approach. Thus the trend would ultimately come to the point where a general practitioner no longer delivers a baby but this must be done by a specialist, he no longer sets a fracture this should be sent to an orthopedist and so forth, on and on. In fact the American College of Surgeons is making an extensive study at this time into just what training is necessary to have what fracture treated and the possibilities of des-

(Continued on Page 502)



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veins

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ANGP 33

(Continued from Page 500)

ignating to which centers each particular fracture should be sent, a certificate of medical ability so to speak. One has to consider to what extent governmental control and socialized medicine is headed and where a patient's choice and the physician's choice must start and end.

In the new court ruling involving the "question of time of discovery", once again we have become involved in the ludicrous. We are now to decide if the fetus is a person and if the fetus should have the right to sue when it becomes of legal age which would be 18 or 21 years of age. This extends the time that mal-practice liability may be applicable which would extend the possible time of suit to well beyond 23 years from the alleged commitment of the act. The question of "the time of discovery" adds a tremendous fact to the liability question.

The recent rulings stating that "no longer does the opinion that a doctor must keep abreast with the medicine practice in his locality", changes many facts of insurance. The new rulings state that "practicing standards in this community does not hold." Recently in Alabama a physician was tried for performing surgery with poor results and at the trial a specialist was brought in from out-of-state to report what was being taught now to be done in these cases. This brings out the question of continued education as related to the capability of doctors. The pertinent fact is that evidence was permitted to be introduced into the trial, stating what is being taught now rather than the standards of practicing physicians in this community. This has tremendous effect on mal-practice insurance.

I am also informed by Mr. Patterson that no figures can be had from insurance companies on the total number of cases in Alabama or in the total figure involved in the settlements in Alabama in relation to mal-practice trials and settlement. So actually we have no way of knowing the total number of cases nor can we get them. Not even

the insurance commissioner can get these figures from insurance writers in this state. Now consider this in light of the Alabama law which requires mal-practice insurance premiums must be tied to Alabama experience. We are unable to prove whether there are more or fewer cases in other states because of the unavailable statistical data. In the Wausau program all of the data are to be made available but it will take three years at least for the program's experience to actually know how many cases and to what extent and to what dollar value the mal-practice field is involved.

Mr. Patterson states that "he knows of only one case in recent years in this state that has been won by the patient through a jury verdict". The information the insurance committee is able to guess at is a probability that the total settlement would not go more than \$250,000 in a year in Alabama. The companies will not give out this information. Aetna claims that in 1969 there was a loss ratio of two and one half times the premium collected. This brings around the punch line of this entire investigation by the state committee; that is that this committee has come to the conclusion that the cost of medicine, and the possibility of mal-practice, is costing 15% of the total cost of medicine in the state of Alabama. If this be true and it is based on the 2 year investigation of the State Medical Association Insurance Committee, this 15% is the one figure that this committee needs to know. The Wausau program definitely has arranged that all premiums will be based on experience in Alabama alone. It stipulates that the books will be open for investigation, will produce statistical data which will eventually produce the actual cost in dollars and cents experience.

The Medical Association would like to see us call for specific legislation. These are very well covered in the report given to us on the first day of the first meeting. One very important recommendation that would heavily influence mal-practice cost is that medical accidents be treated about the same as industrial accidents with specific legislation.

This should include compensation by law as in the other fields of activity in the state.

As each of you well know compensation now in the medical field is based on an astute lawyer casting all kinds of doubt and disturbing the public's confidence in our Universities, hospitals, and all associated persons, doctors and everybody concerned. In an attempt to win the case all facets of the medical field are crucified before the law. The unavoidable accident is bound to happen in the medical field as well as in the industrial field. This is of course not in relation to negligence or mal-practice.

We should have postive laws and limitations and not leave such questions to a jury who obviously are not scientifically prepared to make a judgment but are brought to feel sorry for the patient because he is blind or lame. The law and the court take the approach it seems that they must find some-

body to be a culprit when any kind of bad results are obtained. All the emotions involved in the afflicted patients sitting before the jury regardless of how it happened to come in to play. They must convict a doctor or a nurse or a hospital in someway.

The second question involved is one of continuing edcation. This needs discussion since it is perfectly obvious that this is the utopia in any field as well as the medical field. Nevertheless one can hardly see all the implications involved in this as related to mal-practice, lawsuits and claims.

The fact still remains that regardless of the cost or of the savings, mal-practice risks and the threat of mal-practice to the doctor, hospital and ancillary personnel must in some-way be controlled within reason or eventually the entire country will be in the mal-practice cost spiral as in the fiasco we see in

(Continued on Page 504)

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(Continued from Page 503)

California. This must eventually lead to drastic legislation to forestall the so called liberalization of the legal process in courts.

I recommend for re-reading the dissertation presented to us at our first meeting "The Rising Cost of Mal-practice Insurance and The Effect on The Cost of Health Care." Possibly recommendations to be considered are covered very well in the report.

1. Group Insurance

This is now being implemented through the Wausau program.

2. Peer Review

This is also being implemented in this state. While only starting and barely getting off the ground it has definite possibilities.

3. Modification of the contingency fee.

This could have a tremendous effect on mal-practice.

4. Question of patient purchasing mal-practice insurance.

Suggestion - such as 25c for flight insurance is interesting.

5. Statutory limitation of jury awards.

This should definitely be considered.

6. Unavoidable medical accidents should be treated as industrial accidents under specific legislation.

7. Consider some form of "capability of judgement" in consideration of guilt in alleged cases.

* * *

The wheel that squeaks the loudest often gets replaced.

* * *

When you say "It's none of my business," don't spoil it with "but."

* * *

Progress is growth, growth is membership.

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CONTRAINDICATIONS: Hypersensitivity to any of the tetracyclines.

WARNINGS: Tetracycline usage during tooth development (last half of pregnancy to eight years) may cause permanent tooth discoloration (yellow-gray-brown), which is more common during long-term use but has occurred after repeated short-term courses. Enamel hypoplasia has also been reported. **Tetracyclines should not be used in this age group unless other drugs are not likely to be effective or are contraindicated.**

Usage in pregnancy. (See above **WARNINGS** about use during tooth development.) Animal studies indicate that tetracyclines cross the placenta and can be toxic to the developing fetus (often related to retardation of skeletal development). Embryotoxicity has also been noted in animals treated early in pregnancy.

Usage in newborns, infants, and children. (See above **WARNINGS** about use during tooth development.)

All tetracyclines form a stable calcium complex in any bone-forming tissue. A decrease in fibula growth rate observed in prematures given oral tetracycline 25 mg/kg every 6 hours was reversible when drug was discontinued.

Tetracyclines are present in milk of lactating women taking tetracyclines.

To avoid excess systemic accumulation and liver toxicity in patients with impaired renal function, reduce usual total dosage and, if therapy is prolonged, consider serum level determinations of drug. The antianabolic action of tetracyclines may increase BUN. While not a problem in normal renal function, in patients with significantly impaired function, higher tetracycline serum levels may lead to azotemia, hyperphosphatemia, and acidosis.

Photosensitivity manifested by exaggerated sunburn reaction has occurred with tetracyclines. Patients apt to be exposed to direct sunlight or ultraviolet light should be so advised, and treatment should be discontinued at first evidence of skin erythema.

PRECAUTIONS: If superinfection occurs due to overgrowth of nonsusceptible organisms, including fungi, discontinue antibiotic and start appropriate therapy.

In venereal diseases, when coexistent syphilis is suspected, perform darkfield examination before therapy, and serologically test for syphilis monthly for at least four months.

Tetracyclines have been shown to depress plasma prothrombin activity; patients on anticoagulant therapy may require downward adjustment of their anticoagulant dosage.

In long-term therapy, perform periodic organ system evaluations (including blood, renal, hepatic).

Treat all Group A beta-hemolytic streptococcal infections for at least 10 days.

Since bacteriostatic drugs may interfere with the bactericidal action of penicillin, avoid giving tetracycline with penicillin.

ADVERSE REACTIONS: Gastrointestinal (oral and parenteral forms): anorexia, nausea, vomiting, diarrhea, glossitis, dysphagia, enterocolitis inflammatory lesions (with monilial overgrowth) in the anogenital region.

Skin: maculopapular and erythematous rashes; exfoliative dermatitis (uncommon). Photosensitivity is discussed above (See **WARNINGS**).

Renal toxicity: rise in BUN, apparently dose related (See **WARNINGS**).

Hypersensitivity: urticaria, angioneurotic edema, anaphylaxis, anaphylactoid purpura, pericarditis, exacerbation of systemic lupus erythematosus.

Bulging fontanels, reported in young infants after full therapeutic dosage, have disappeared rapidly when drug was discontinued.

Blood: hemolytic anemia, thrombocytopenia, neutropenia, eosinophilia.

Over prolonged periods, tetracyclines have been reported to produce brown-black microscopic discoloration of thyroid glands; no abnormalities of thyroid function studies are known to occur.

USUAL DOSAGE: Adults—600 mg daily, divided into two or four equally spaced doses. More severe infections: an initial dose of 300 mg followed by 150 mg every six hours or 300 mg every 12 hours. Gonorrhea: In uncomplicated gonorrhea, when penicillin is contraindicated, 'Rondomycin' (methacycline HCl) may be used for treating both males and females in the following clinical dosage schedule: 900 mg initially, followed by 300 mg q.i.d. for a total of 5.4 grams.

For treatment of syphilis, when penicillin is contraindicated, a total of 18 to 24 grams of 'Rondomycin' (methacycline HCl) in equally divided doses over a period of 10-15 days should be given. Close follow-up, including laboratory tests, is recommended.

Eaton Agent pneumonia: 900 mg daily for six days.

Children—3 to 6 mg/lb/day divided into two to four equally spaced doses.

Therapy should be continued for at least 24-48 hours after symptoms and fever have subsided.

Concomitant therapy: Antacids containing aluminum, calcium or magnesium impair absorption and are contraindicated. Food and some dairy products also interfere. Give drug one hour before or two hours after meals. Pediatric oral dosage forms should not be given with milk formulas and should be given at least one hour prior to feeding.

In patients with renal impairment (see **WARNINGS**), total dosage should be decreased by reducing recommended individual doses or by extending time intervals between doses.

In streptococcal infections, a therapeutic dose should be given for at least 10 days.

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around the state

Vital Statistics

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Wenzel, Ralph Erhart, b 13, mc Northwestern U. Medical School 38, recip. Minn. 72, P. O. Box 908, Foley, Alabama 36535. GP.

Calhoun County

McCrimmon, Cyrus Herbert, Jr., b 36, mc Med. College of Ala. 63, sb 64, 429 E. 9th St., Anniston, Alabama 36201. Or.

Lauderdale County

Thompson, Donald Fred, b 38, mc U. Ark. 64, recip. Ark 72, 106 South Locust St., Florence, Alabama 35630. D.

Mobile County

Bucher, Robert Monroe, b 20, mc Temple U. 44, recip. Penn. 71, 745 Westmoreland Dr., E., Mobile, Alabama 36609.

Foster, Maynard Vivian, b 23, mc Meharry Med. College 51, recip. Kentucky 52, 1453 Davis Ave., Mobile, Alabama 36603. GP.

Goodloe, Travis Bedsole, b 41, mc U. Ala. 67, sb 68, 1720 Springhill Ave., Mobile, Alabama 36604. Pd.

Harper, Howard Clayton, Jr., b 43, mc U. Ala. 69, recip. NBME 70, 1720 Springhill Ave., Mobile, Alabama 36604. Pd.

Harrison, James Max, Jr., b 41, mc U. Ala. 66, sb 67, 1720 Springhill Ave., Mobile, Alabama 36604. Oph.

Kincaid, Charles Kenneth, b 07, mc Ohio U. 35, recip. Ohio 70, 4403 Knob Hill Dr., Mobile, Alabama 36609. PH.

King, Robert Brown, b 18, mc New York Med. College 53, recip. NBME 72, 555 Stanton Rd., Mobile, Alabama 36617. P.

McLaughlin, Leon Durward, Jr., b 43, mc U. Ala. 69, sb 70, 2218 Fulbrook Center, Mobile, Alabama 36605. GP.

Ozment, Elmo Dodd, Jr., b 39, mc U. Tenn. 65, recip. Tenn. 66, 2451 Fillingim St., Mobile, Alabama 36617. S.

Scripter, Lyman Jay, b 23, mc U. Pittsburg 49, recip. Penn. 71, 241 Cox St., Mobile, Alabama 36604. Path.

Taylor, Burt Fowler, b 36, mc U. Tenn. 62, recip. Tenn. 71, 1761 Springhill Ave., Mobile, Alabama 36604. Or.

MEMBERS DECEASED

Colbert County

Trapp, Walter Russell, Tuscumbia, Alabama, Deceased 10/28/72

Cullman County

Pinkerton, Haskell Andrew, Cullman, Alabama, Deceased 3/29/72

Mobile County

O'Gwynn, John Coleman, Jr., Mobile, Alabama, Deceased 7/13/72

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Seay, John D., present Fayette to 204 Vanderbilt Dr., Mobile, Alabama 36608.

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Cloyd, Walter L., present Birmingham to 2512 Beaumont Circle, Birmingham, Alabama 35216.

Hudson, Bryant H., III, present Birmingham to 817 Audubon Pl., Shreveport, Louisiana 71105.

Johnson, Benjamin H., Jr., present Bessemer to P. O. Box 747, 800 Clinic Lane, Bessemer, Alabama 35020.

McMahon, John M., present Bessemer to P. O. Box 747, 800 Clinic Lane, Bessemer, Alabama 35020.

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Coleman, E. Edwin, Jr., present Prichard to P. O. Box 267, Saraland, Alabama 36571.

Cowden, Robert W., present Mobile to 1153 Springhill Ave., Mobile, Alabama 36607.

Dismukes, Henry M., present Mobile to Suite 310, Van Antwerp Bldg., Mobile, Alabama 36602.

Dixon, James P., present Mobile to 2309 Costarides, Mobile, Alabama 36617.

Flynn, Edward J., Jr., present Mobile to 4 Drury Lane, Mobile, Alabama 36608.

Goodgrass, Phillip A., present Mobile to 171 Louiselle St., Mobile, Alabama 36607.

Wert, Earl B., present Mobile to Mobile Infirmary, P. O. Box 7544, Mobile, Alabama 36607.

Montgomery County

Lincoln, Arthur F., present Montgomery to 1722 Pine St., Room 401, Montgomery, Alabama 36106.

Lochte, William P., present Montgomery to 1722 Pine St., Room 401, Montgomery, Alabama 36106.

Tallapoosa County

Chapman, John R., present Alexander City, Alabama to Springhill Plaza, 280 By Pass, Alexander City, Alabama 35010.

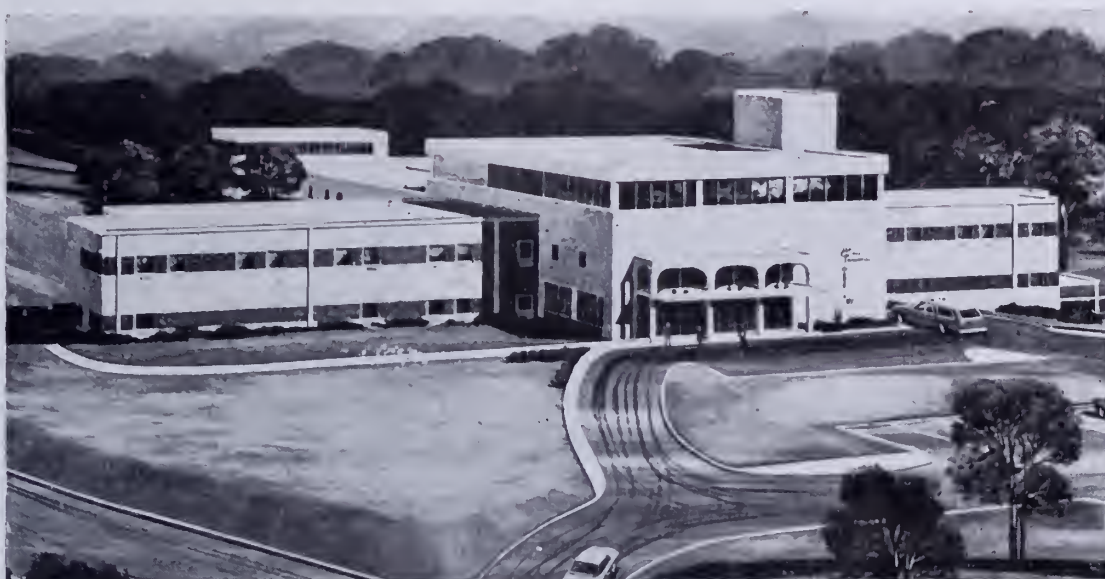
Tuscaloosa County

Drynan, James R., present Anaconda, Montana to 3015 St. Ann St., Butte, Montana 59701.

NEW TELEPHONE NUMBERS

Bedsole, D. O., Mobile	457-8668
Bucher, R. M., Mobile	342-8896
Foster, M. V., Mobile	438-9849
Goodloe, T. B., Mobile	438-3577
Harper, H. C., Jr., Mobile	438-3577
Harris, E. C., Jr., Mobile	479-7401
Harrison, J. M., Jr., Mobile	433-2564
Kincaid, C. K., Mobile	661-2876

(Continued on Page 512)



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For Intensive Treatment of Psychiatric Disorders

This 113-bed non-governmental psychiatric hospital provides modern facilities for diagnosis and treatment of patients with all degrees of illness, including those who show severely disturbed behavior. Alcoholic and drug abuse patients are also accepted.

In addition to care by psychiatrists and by consultants in all medical specialties, the treatment program includes occupational, recreational, and physical therapy, social services, and tutoring. Emphasis is on short-term, intensive treatment of voluntary patients.

Hill Crest is a member of: American Hospital Association, National Association of Private Psychiatric Hospital, Alabama Hospital Association, Birmingham Regional Hospital Council.

Accredited by Joint Commission on Accreditation of Hospitals. Medicare Approved. Blue Cross Participating Hospital.

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James K. Ward, M. D.
Hardin M. Ritchey, M. D.
F. Joseph Nuckols, M. D.
James A. Greene, M. D.
Charles W. Moorefield, M. D.

ADMINISTRATOR:

Robert V. Sanders

DIRECTOR OF SOCIAL SERVICES:

James T. Kemp, A. C. S. W.

HILL CREST HOSPITAL

Hill Crest Foundation, Inc.

6869 Fifth Avenue South

Birmingham, Alabama 35212

PHONE: 205-836-7201

Pinworm therapy is often a family affair



Contraindications: History of hypersensitivity to thiabendazole.

Warnings: If hypersensitivity reactions occur, drug should be discontinued immediately and not resumed. Rarely, erythema multiforme has been associated with thiabendazole therapy; in severe cases (Stevens-Johnson syndrome), fatalities have occurred. Because CNS side effects may occur quite frequently, activities requiring mental alertness should be avoided. Safe use in pregnancy or lactation has not been established.

Precautions: Ideally, supportive therapy is indicated for anemic, dehydrated, or malnourished patients prior to initiation of anthelmintic therapy. In presence of hepatic or renal dysfunction,

patients should be carefully monitored.

Adverse Reactions: Most frequently encountered are anorexia, nausea, vomiting, and dizziness. Less frequently, diarrhea, epigastric distress, pruritus, weariness, drowsiness, giddiness and headache have occurred. Rarely, tinnitus, hyperirritability, numbness, abnormal sensation in eyes, blurring of vision, xanthopsia; hypotension, collapse; enuresis; transient rise in cephalin flocculation and SGOT; perianal rash, cholestasis and parenchymal liver damage; hyperglycemia; transient leukopenia; malodor of the urine, crystalluria, hematuria; appearance of *Ascaris* in the mouth and nose. Hypersensitivity reactions

A New Dosage Form:

Chewable Tablets 500 mg Mintezol[®] THIABENDAZOLE | MSD)



so easy to take
everyone in the family
can keep to the
regimen you prescribe

side: fever, facial flush, chills, conjunctival injection,
edema, anaphylaxis, skin rashes, erythema multiforme
cluding Stevens-Johnson syndrome), and lymphadenopathy.
olied: Chewable tablets, containing 500 mg thiabendazole,
boxes of 36, strip packaged, individually foil wrapped;
ension, containing 500 mg thiabendazole per 5 cc, in
les of 120 cc.

more detailed information, consult your MSD representa-
or see full prescribing information. Merck Sharp &
ne, Division of Merck & Co., Inc., West Point, Pa. 19486

INDICATION | DOSAGE SCHEDULE

MINTEZOL[®] (Thiabendazole, MSD) has demonstrated effectiveness against a broad spectrum of nematode infections. Dosages are weight related. For your convenience, the information in the weight-dose chart below is included in the full prescribing information and in the 1973 edition of PDR.

The recommended maximum daily dose of MINTEZOL is 3 g (6 tablets).

MINTEZOL should be given after meals if possible. Dietary restriction, complementary medications, and cleansing enemas are not needed.

The usual dosage schedule for all conditions is two doses per day. The size of the dose is determined by the patient's weight.

Weight-dose chart:

WEIGHT (lb)	EACH DOSE (g)	TABLETS
25	0.25	1/2
50	0.5	1
75	0.75	1 1/2
100	1.0	2
125	1.25	2 1/2
150 & over	1.5	3

The regimen for each indication follows:

INDICATION	REGIMEN	COMMENTS
Pinworm disease	Two doses per day for 1 day. Repeat in 7 days. This regimen is designed to reduce the risk of reinfection.	If this is not practical, give 2 doses per day for 2 successive days.
Threadworm,* large roundworm,* hookworm,* and whipworm* disease	Two doses per day for 2 successive days.	A single dose of 20 mg/lb or 50 mg/kg may be employed as an alternative schedule, but a higher incidence of side effects should be expected.
Creeping eruption	Two doses per day for 2 successive days.	If active lesions are still present 2 days after completion of therapy, a second course is recommended.
Symptoms of trichinosis* during the invasive phase of the disease	Two doses per day for 2 to 4 successive days according to the response of the patient.	The optimal dosage for the treatment of trichinosis has not been established.

*Clinical experience with thiabendazole for treatment of each of these conditions in children weighing less than 30 lb has been limited.

(Continued from Page 508)

King, R. B., Mobile	473-4423
Laughlin, E. H., Madison	539-6578
McLaughlin, L. D., Jr., Mobile	478-3361
Moorman, R. S., Jr., Madison	539-4481
Ozment, E. D., Jr., Mobile	473-0341
Sanford, J. E., Fayette	932-5211
Savage, C. H., Jr., Mobile	471-4419
Scripter, L. J., Mobile	433-2514
Snodgrass, P. A., Mobile	432-0444
Taylor, B. F., Mobile	432-1681
Thompson, D. F., Lauderdale	764-8212
Wenzel, R. E., Baldwin	949-7126

MEMBERS TRANSFERRED

Mobile County

Daugherty, Manuel P., 1653 Springhill Ave., Mobile, Alabama 36604, from member of Jefferson County Medical Society to member of Mobile County Medical Society. Or.

Fayette County

Sanford, Jon E., 206 Luxapalilla St., Fayette, Alabama 35555 from member of Pickens County Medical Society to member of Fayette County Medical Society. GP.

CHANGE OF SPECIALTY

Choctaw County

Land, Robert D., 105 West Pushmataha, P. O. Box 308, Butler, Alabama 36904. S.

Jefferson County

Robinson, Carl R., 1702 6th Ave., N., Bessemer, Alabama 35020. (GP., S., Medico-legal)

CHANGE OF OFFICERS

Tuscaloosa County

Remove:

President	J. H. Hollingsworth
President-Elect	T. E. Brandon, Jr.
Sec.-Treas.	W. A. Taylor

Add:

President	T. E. Brandon, Jr.
President-Elect	
Sec.-Treas.	W. A. Bright

Remove:

Censors	J. H. Nelson, Chairman
	J. D. Smith

Add:

Censors	J. L. Shamblin, Jr., Chairman
	John Burnum
	W. F. Simpson

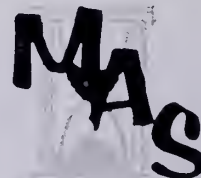
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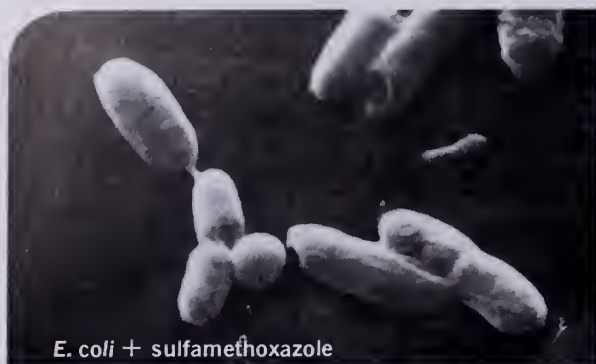
Encounter under the Scanning Electron Microscope



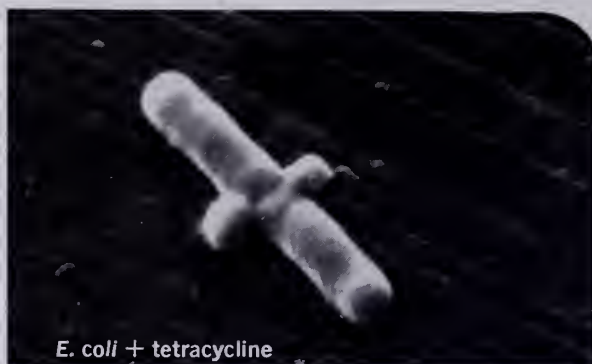
SEM reveals changes in *E. coli* exposed to antibacterial agents

The Scanning Electron Microscope (SEM) is the only instrument which gives 3-dimensional views on a microscopic level. This permits the surface morphology of microorganisms to be observed in

detailed perspective. Changes in surface morphology of *E. coli* exposed to various antimicrobial agents are seen on the following page. An SEM photomicrograph of normal control *E. coli* appears above.



E. coli + sulfamethoxazole



E. coli + tetracycline



E. coli + cephalothin



E. coli + ampicillin

Different modes of antibacterial action — Similar changes in morphology

As part of a series of experiments,¹⁻³ strains of *E. coli* proven susceptible to each antibacterial agent were exposed to 1 MIC of the respective antibacterials for a three-hour period. Included were cell-wall-active drugs, ampicillin and cephalothin; a drug interfering with intracellular protein synthesis, tetracycline; and a chemical agent which acts by interference with para-aminobenzoic acid, sulfamethoxazole.

As seen above, elongation of the bacilli, mid-cell defects and spheroplast-like forms may be appreciated with the SEM technique. These changes in bacterial morphology were similar...regardless of the antibacterial agent used and irrespective of

its mechanism of action.

"At present, the significance of these observations in clinical infection must be considered with caution, but it is hoped that these data will stimulate a reevaluation of present concepts of the nature and role of morphological variants of bacteria exposed to a variety of antibacterial factors."²

It should be noted that no clinical conclusions can be drawn from this study, as it is not always possible to extrapolate *in vitro* data to humans.

References: 1. Klainer, A. S.; Fass, R. J., and Perkins, R. L.: Scientific Exhibit presented at the 25th American Medical Association Clinical Convention, New Orleans, La., Nov. 28-Dec. 1, 1971. 2. Klainer, A. S., and Perkins, R. L.: *Antimicrob. Agents Chemother.*, 1:164, 1972. 3. Klainer, A. S.: Data on file, Hoffmann-La Roche Inc., Nutley, N.J.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Acute, recurrent or chronic nonobstructed urinary tract infections (primarily pyelonephritis, pyelitis and cystitis) due to susceptible organisms. **Note: Carefully coordinate *in vitro* sulfonamide sensitivity tests with bacteriologic and clinical response; add aminobenzoic acid to follow-up culture media.** The increasing frequency of resistant organisms limits the usefulness of antibacterials including sulfonamides, especially in chronic or recurrent urinary tract infections. Measure sulfonamide blood levels as variations may occur; 20 mg/100 ml should be maximum total level.

Contraindications: Sulfonamide hypersensitivity; pregnancy at term and during nursing period; infants less than two months of age.

Warnings: Safety during pregnancy has not been estab-

lished. Sulfonamides should not be used for group A hemolytic streptococcal infections and will not eradicate prevent sequelae (rheumatic fever, glomerulonephritis) of infections. Deaths from hypersensitivity reactions, agranulosis, aplastic anemia and other blood dyscrasias have been reported and early clinical signs (sore throat, fever, pallor, purpura or jaundice) may indicate serious blood disorders. Frequent and urinalysis with microscopic examination are recommended during sulfonamide therapy. Insufficient data on children under six with chronic renal disease.

Precautions: Use cautiously in patients with impaired or hepatic function, severe allergy, bronchial asthma; in glucose 6-phosphate dehydrogenase-deficient individuals in whom related hemolysis may occur. Maintain adequate fluid intake to prevent crystalluria and stone formation.

Adverse Reactions: *Blood dyscrasias* (agranulocytosis and

Encounter in Clinical Practice

Control of primary bacterial offenders

Antibacterial Gantanol® (sulfamethoxazole) controls susceptible strains of *E. coli* and other gram-negative and gram-positive organisms

often implicated in acute nonobstructed pyelonephritis and cystitis.

Prompt antibacterial blood and urine levels

In from 2 to 3 hours after the initial 2-Gm adult dose, antibacterial levels are present in

both the blood and urine.

B.I.D./T.I.D. dosage for around-the-clock coverage

Subsequent 1-Gm doses provide up to 12 hours of antibacterial coverage. More severe u.t.i. may require a q. 8 h. dosage regimen. Either schedule provides coverage during the waking

and sleeping hours—especially important during hours of sleep when normal urinary retention tends to favor bacterial proliferation.

Also effective in nonobstructed chronic and recurrent u.t.i.

It is not uncommon for the elderly and the debilitated to develop chronic and/or recurrent nonobstructed urinary tract infections such as pyelonephritis and cystitis. Such cases often re-

spond satisfactorily to Gantanol. The increasing frequency of resistant organisms is a limitation of usefulness of antibacterial agents including sulfonamides, especially in chronic or recurrent u.t.i.

Your Option: Tablets or Suspension

Either dosage form—the Tablets or the pleasant-tasting, cherry-flavored Suspension—can provide the dependable antibacterial activity necessary to control susceptible nonobstructed cystitis and pyelonephritis. Symptomatic improvement may usually be expected in 24 to 48 hours. The usual precautions with sulfonamide

therapy should be observed, including adequate fluid intake. Gantanol (sulfamethoxazole) is generally well tolerated with relative freedom from complications; the most common side effects are nausea, vomiting and diarrhea. Frequent c.b.c.'s and urinalyses with microscopic examination are recommended.

In nonobstructed cystitis and pyelonephritis due to susceptible organisms

Gantanol®
(sulfamethoxazole)
Basic Therapy

stic anemia, thrombocytopenia, leukopenia, hemolytic ane-
purpura, hypoprothrombinemia and methemoglobinemia);
gic reactions (erythema multiforme, skin eruptions, epider-
necrolysis, urticaria, serum sickness, pruritus, exfoliative
atitis, anaphylactoid reactions, periorbital edema, conjunc-
and scleral injection, photosensitization, arthralgia and
gic myocarditis); *gastrointestinal reactions* (nausea, emesis,
minal pains, hepatitis, diarrhea, anorexia, pancreatitis and
atitis); *CNS reactions* (headache, peripheral neuritis, men-
depression, convulsions, ataxia, hallucinations, tinnitus, ver-
and insomnia); *miscellaneous reactions* (drug fever, chills,
nephrosis with oliguria and anuria, periarteritis nodosa and
phenomenon). Due to certain chemical similarities with
e goitrogens, diuretics (acetazolamide, thiazides) and oral
glycemic agents, sulfonamides have caused rare instances
iter production, diuresis and hypoglycemia as well as thy-

roid malignancies in rats following long-term administration.
Cross-sensitivity with these agents may exist.

**Dosage: Systemic sulfonamides are contraindicated in in-
fants under 2 months of age** (except adjunctively with pyrimeth-
amine in congenital toxoplasmosis).

Usual adult dosage: 2 Gm (4 tabs or teasp.) initially, then
1 Gm *b.i.d.* or *t.i.d.* depending on severity of infection.

Usual child's dosage: 0.5 Gm (1 tab or teasp.)/20 lbs of
body weight initially, then 0.25 Gm/20 lbs *b.i.d.* Maximum dose
should not exceed 75 mg/kg/24 hrs.

Supplied: Tablets, 0.5 Gm sulfamethoxazole; Suspension,
0.5 Gm sulfamethoxazole/teaspoonful.



Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110

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Gastroenteritis, colitis, gastritis or duodenitis can produce spasm or hypermotility, gas distention and discomfort. But Kinesed can provide a balanced formulation to relieve these symptoms:

- ☐ belladonna alkaloids—for the hyperactive bowel
- ☐ simethicone—for accompanying distention and pain due to gas
- ☐ phenobarbital—for associated anxiety and tension

Contraindications: Hypersensitivity to barbiturates or belladonna alkaloids, glaucoma, advanced renal or hepatic disease.

Precautions: Administer with caution to patients with incipient glaucoma, bladder neck obstruction or urinary bladder atony. Prolonged use of barbiturates may be habit-forming.

Side effects: Blurred vision, dry mouth, dysuria, and other

atropine-like side effects may occur at high doses, but are only rarely noted at recommended dosages.

Dosage: *Adults:* One or two tablets three or four times daily. Dosage can be adjusted depending on diagnosis and severity of symptoms.

Children 2 to 12 years: One-half or one tablet three or four times daily. Tablets may be chewed or swallowed with liquids.



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(from the Greek *kinetikos*,
to move,
and the Latin *sedatus*,
to calm)

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Each *chewable tablet* contains: 16 mg. phenobarbital (warning: may be habit-forming); 0.1 mg. hyoscyamine sulfate; 0.02 mg. atropine sulfate; 0.007 mg. scopolamine hydrobromide; 40 mg. simethicone.

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This southwestern desert lizard seeks
shelter in crevices of rocks.
When attempts are made to probe him
from his niche, he gulps air
until his abdomen is distended up to
sixty per cent over its normal size...
thus wedging himself tightly
in place and preventing capture.

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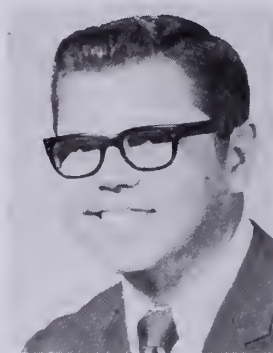
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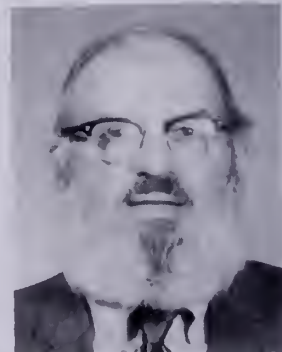
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M. D.
Auburn-Opelika



J. L. Henderson,
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Mobile



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Tuscaloosa



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Foley

Birmingham's Emergency Ambulance Service

In the City of Birmingham, Alabama, and surrounding Jefferson County, municipal ambulance service has undergone some vast improvements during the last three years since A & A Ambulance Service, Inc., has been under city contract. Many of the improvements stem from one specific area; a revised network of two-way radio communications.

Birmingham had not been without ambulance service prior to the A & A contract. For at least 15 years previously, there had been ambulance services available, but lack of coordination and the nonexistence of specific guidelines frequently resulted in poor service.

The heart of the A & A operation is its two-way radio dispatching console, manufactured by Motorola Communications & Electronics. From this main dispatch center, A & A Ambulances within the three city zones of Birmingham respond to police emergencies, fire disasters or private calls from local citizens.

In total, A & A provides its services to approximately 600,000 people living within the 85,000 square mile city and county area. The company has 24 employees and operates 12 ambulances.

Up until the time A & A was appointed to provide municipal ambulance services, there were a great many questions regarding exactly what an ambulance service is and what it can and can not do. In many instances, an ambulance was simply the vehicle used to transfer a deceased person from hospital to mortuary because it offered the convenience of a bed.

The philosophy of Mr. Ray Gailbreath, President of A & A, has drastically changed some of the former beliefs about ambulances. His company has equipped itself with the finest tools available and provided the most extensive paramedical training possible for his Emergency Medical Technicians

(EMTs). Today, Birmingham's ambulance service is considered as much a part of the city's municipal services as the police and fire departments.

"In the United States, we have one of the best medical systems, but one of the poorest delivery systems in the world," says Gailbreath. "As U. S. citizens we are guaranteed the right of protection from criminals and fire. It should similarly be our right to receive swift service and protection against dying when we are injured on the road."

To provide the services and supplies so frequently needed in an emergency, A & A Ambulance Service has followed the guidelines set forth by the National Council of Orthopedic Surgeons. There is a published list which contains all the necessary life-saving equipment that every ambulance in the U. S. should have, and among these items are mobile and portable two-way radios.

"The communications system is only as good as the people who build it and the people who are going to use it," says Gailbreath. "We know the quality of the people who use it because we train them ourselves. When it comes to the builder, we wanted to work with people who had the greatest amount of experience in equipping emergency-type vehicles with two-way radios. Motorola was our obvious choice."

The basic unit used by A & A is the "Mocom-70" mobile radio with a 45-watt base station transmitter. "It's about the best mobile radio I've seen," says Gailbreath. "It's the only trouble-free radio I've ever seen. The radios we had before were giving us about 80 percent usage factor. Now we're running about 99 percent and I can't even remember the last time we had one of our 'Mocom-70' units down."

A & A operates with two radio frequencies. One frequency is the administrative frequency which is used 95 percent of the

time for normal console-to-mobile communications or portable-to-console communications.

The second unit used by A & A is the Hospital Emergency Administrative Radio (HEAR). When on this frequency, the ambulance EMT can communicate directly with the hospital and talk to doctors and nurses to both communicate the patient's condition or to obtain emergency information to apply to the patient to help keep him alive.

The HEAR network is additionally set up to communicate electrocardiogram (EKG) results as they are being taken in the ambulance. By the time a cardiac patient reaches the hospital, doctors and surgeons are already provided with information they will need. The time savings aspect of such a service is crucial in many cases. If a patient is bleeding and the EMT is having little success in stopping the flow, he can talk to a professional and receive the advice which may save a life.

Each of the A & A ambulance crews is provided with a Motorola "Handie-Talkie" two-way portable radio. With this tool, the EMT can be away from the ambulance but still remain in radio contact with the hospital. This is done through the central console whereby the communication develops first from the scene to the console and then on to the hospital.

The "Handie-Talkie" radio has been helpful at other times. An example is a sports event which is generally attended by a couple of doctors and an A & A ambulance crew. In the event of injury, the doctors at the scene can use the "Handie-Talkie" portables to communicate directly with other doctors or specialists at the hospital to make necessary arrangements.

Gailbreath estimates the portables have already been responsible for at least a 40-percent increase in operating efficiency. Because everything is so fast and direct, there is little wasted motion or time. Locating an EMT is never a problem because his radio goes with him everywhere. At one time, the

EMTs, who work a 24-hour shift, would take their meals only at restaurants which had several telephones.

One of the main problems encountered by the City of Birmingham in the past was the duplication which frequently accompanied an emergency call. In the event of an emergency, it was not uncommon for both police, fire and ambulance services to respond to the same call.

By using the central radio communications console, the duplication problem has been significantly reduced. When an emergency call is received at the console, the dispatcher is in a position to know which municipal services should be involved. He is familiar with the various types of equipment carried by each department and can rapidly determine if an ambulance is needed or if only a fire resuscitator squad can handle the situation.

All major emergency services, i. e., the police department, the fire department, the Red Cross, and the Civil Defense agency, channel their communication into the main A & A dispatch console. Having this convenience reduces the delays encountered when each department calls the other.

If a call comes in about a heart attack, the dispatcher will immediately call the Birmingham Fire Department because they all carry the resuscitator equipment. In addition, he will dispatch one of the ambulances. This will also alert both vehicles that they are approaching the same area and if under siren to be observant for the other.

If a policeman calls in, he'll identify his car and then request an ambulance for a particular address. The dispatcher will contact one of the ambulances and then confirm the dispatch to the policeman.

The dispatching of emergency vehicles in Birmingham is based on zone. The city is divided into three such zones and by stationing ambulances within these zones, A & A can be more responsive to its calls. This is also true because the hospitals are also lo-

(Continued on Page 522)

In 1818, during the first session of the House of Representatives of the Territorial Assembly of Alabama, a Representative from Monroe County petitioned for legislation placing control of the medical profession in the hands of physicians.

BLUE CROSS-BLUE SHIELD OF ALABAMA



cated by zone and people ordinarily would go to the hospital in their zone.

An advantage to the zone concept is that the ambulance drivers become more familiar with the territory within their zones and can get around easier and faster. In each zone, there is an A & A substation equipped with two beds, a kitchen and bathroom. When a call comes in, the main dispatcher dials a two-digit number which sounds a loud beep at the substation. The details are now kept by the dispatcher and then put into computer memory storage. At the end of each year, a computer readout will provide details on the density of calls or locations. Such information is helpful in enabling substations to be placed in the closest proximity to the high-density areas.

At present, A & A handles about 50 emergency calls per day within the City of Birmingham. Average response time to these calls is between five and seven minutes. "This time has been reduced with our Motorola radio network," says Gailbreath. "In our old system we had one-channel radios and they were not too reliable. We needed something better, and when you're dealing with people's lives, communications must be made instantly. The patient cannot afford to wait while we make two or three calls just to get an answer."

"Our present radio system is what you would call an open-end system," continues Gailbreath. "We can add to our system whenever we want to and this has been our practice about every six months. We're not afraid to make changes which will improve our service and that is one of the reasons why we were appointed by the city in the first place. Our communications network is designed to do one necessary job and that's to save lives."

Transmission of radio signals in the Birmingham area has been quite good, according to Gailbreath. "We can talk to Tuscaloosa which is about 62 miles from here. Our antenna is located remotely from our base station and is situated atop a nearby mountain. We have even transmitted EKG's as

much as 50 to 60 miles with at least 90 percent efficiency and within a 30-mile radius we get 99 percent efficiency."

In a typical emergency call there is an order of procedure which A & A has established for itself. Emergency calls can come from anywhere in Birmingham or in any of the 36 municipalities in Jefferson County.

"As calls come in, our dispatchers try to get as much information about the call as possible," explains Gailbreath. "We talk to the people and try to draw a lot of information out of them. The dispatcher must then make the determination of which ambulance to call. Sometimes he'll pull a car on routine call out of service if it is closest to the sick or injured person."

Decisions must then be made as to travel under siren or red lights. This is a critical decision because sometimes these items create more problems than they solve. Time-cards are maintained for each call and indicate the time the call was received, which vehicle responded to the call, arrival time at the scene, departure from the scene, and arrival time at the hospital. All details are eventually fed into the computer.

At the same time as the receipt of a call, the dispatcher may contact the police in the municipality that is concerned with the call and may request an escort. In any event it alerts them to the fact that a speeding ambulance is on its way and solves the problem of one emergency vehicle running into another emergency vehicle.

Once an ambulance is on its way to a call, it may radio back to the dispatcher requesting details of blocked streets or any other traffic hazards which could slow its progress.

"Our radio communications have helped to cut down our maintenance costs and have saved roughly \$10,000 a year," says Gailbreath. "We don't have as much wear and tear on our equipment and have reduced our gasoline expenses. Radio has increased efficiency all around and we've been able to get the right equipment to the right place at the right time."

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Hunger Control VS. Weight Control



S. K. Fineberg, M.D.

Clinical Assistant Professor of Medicine,
New York Medical College.
Chief, Diabetes and Obesity-Diabetes Clinics,
Metropolitan Hospital, N.Y.C.
Director of Medicine,
Prospect Hospital, Bronx, N.Y.

*The statements by Dr. Fineberg are
intended as medical information, and do not
involve endorsement of any product.*

Although effective appetite suppression is available, "...controlling hunger is not a simple solution to the complex problems of obesity."*

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"Their use should only be as part of an intensive program which includes patient motivation, instructions in diet, good nutrition and a knowledge of the caloric content of foods."

Preludin is indicated in exogenous obesity as a short-term (a few weeks) adjunct in a regimen of weight reduction based on caloric restriction. For full details, please see the Prescribing Information. It is summarized on the adjacent page.

*Fineberg, S.K.: Presented at Annual Meeting, American Society of Geriatrics, New York City, April 5, 1972.

Preludin® phenmetrazine hydrochloride NF

Preludin[®] phenmetrazine hydrochloride

Endurets[®] prolonged-action tablets

Preludin[®] (C) phenmetrazine hydrochloride NF

Indications: Preludin is indicated in exogenous obesity as a short-term (a few weeks) adjunct in a regimen of weight reduction based on caloric restriction.

Contraindications: Advanced arteriosclerosis, symptomatic cardiovascular disease, moderate to severe hypertension, hyperthyroidism, known hypersensitivity or idiosyncrasy to sympathomimetic amines, and agitated states. Patients with a history of drug abuse. Do not use with other CNS stimulants or MAO inhibitors. Use within 14 days following the administration of monoamine oxidase inhibitors may result in hypertensive crises.

Warnings: Tolerance usually develops within a few weeks. When it occurs, the recommended dosage should not be exceeded in an attempt to increase anorectic effect.

Drug Dependence: Tolerance and extreme psychological dependence have occurred. Patients have been known to increase dosage of drugs of this type to many times the recommended dosage. Abrupt cessation following prolonged high dosage results in extreme fatigue, mental depression, and reversible changes in the sleep EEG. Manifestations of chronic intoxication include severe dermatoses, marked insomnia, irritability, hyperactivity and personality changes. The most severe manifestation is psychosis, often clinically indistinguishable from schizophrenia.

Caution patients on the possibility of impaired ability to operate machinery or drive a motor vehicle or engage in other potentially hazardous activity.

Use in Pregnancy: There have been clinical reports of congenital malformation associated with the use of this compound but a causal relationship has not been proved. Until more information is available, Preludin should not be used by women who are or may become pregnant, particularly in the first trimester, unless the physician feels potential benefits outweigh possible risks.

Use in Children: Not recommended for use in children under 12 years of age.

Precautions: Use with caution in patients with mild hypertension. Insulin requirements in diabetes mellitus may be altered. Association with anorectic agents and concomitant dietary regimen. Psychological disturbances may occur in some patients on a restrictive diet with or without concomitant use of anorectic agent.

Adverse Reactions: Overstimulation, restlessness, insomnia, anxiety, headache, agitation, flushing, tremor, sweating, dizziness,

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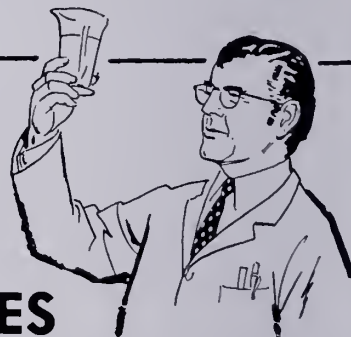
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Before prescribing, please consult complete product information, a summary of which follows:

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Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

Dosage: Individualize for maximum beneficial effect.

Adults: Tension, anxiety and psychoneurotic states, 2 to 10 mg b.i.d. to q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; adjunctively in skeletal muscle spasm, 2 to 10 mg t.i.d. or q.i.d.; adjunctively in convulsive disorders, 2 to 10 mg b.i.d. to q.i.d. *Geriatric or debilitated patients:* 2 to 2½ mg, 1 or 2 times daily initially, increasing as needed and tolerated. (See Precautions.) **Children:** 1 to 2½ mg t.i.d. or q.i.d. initially, increasing as needed and tolerated (not for use under 6 months).

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THE JOURNAL

of the

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Warnings: Use during pregnancy is to be avoided.

Precautions: 1. *Starvation Ketosis:*

This must be differentiated from "insulin lack" ketosis and is characterized by ketonuria which, in spite of relatively normal blood and urine sugar, may result from excessive phenformin therapy, excessive insulin reduction, or insufficient carbohydrate intake. Adjust insulin dosage, lower phenformin dosage, or supply carbohydrates to alleviate this state.

Do not give insulin without first checking blood and urine sugar. 2. *Lactic Acidosis:* This drug is not recommended in the presence of azotemia or in any clinical situation that predisposes to sustained hypotension that could lead to lactic acidosis. To differentiate lactic acidosis from ketoacidosis, periodic

determinations of ketones in the blood and urine should be made in diabetics previously stabilized on phenformin, or phenformin and insulin, who have become unstable. If electrolyte imbalance is suspected, periodic determinations should also be made of electrolytes, pH, and the lactate-pyruvate ratio. The drug should be withdrawn and insulin, when required, and other corrective measures instituted immediately upon the appearance of any metabolic acidosis.

3. *Hypoglycemia:* Although hypoglycemic reactions are rare when phenformin is used alone, every precaution should be observed during the dosage adjustment period particularly when insulin or a sulfonylurea has been given in combination with phenformin.

Adverse Reactions: Principally

gastrointestinal; unpleasant metallic taste, continuing to anorexia, nausea and, less frequently, vomiting and diarrhea. Reduce dosage at first sign of these symptoms. In case of vomiting, the drug should be immediately withdrawn. Although rare, urticaria has been reported, as have gastrointestinal symptoms such as anorexia, nausea and vomiting following excessive alcohol intake. (B) 98-146-103-D (6/72)

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President's Page

The Presidents of this Association for the last several years have been kind enough to invite the President-Elect to write this page for him. I will do my best to bring into focus some of the problems which have come to my attention during the past several months. Speaking with physicians from all sections of the State, I think that by all means the most common problem we have, in this Association, is indifference on the part of many of the members. Many do not seem to care what goes on or attempt to take any part in Association affairs. In fact, most of our members do not even bother to attend the annual meetings.

I am sure that there are many reasons why this is the case. Perhaps the most commonly explained reason for the indifference is that many members do not feel that they have an active role in the affairs of the Association. While I do not think that this is completely true, we have moved in the direction of rectifying some of the possible reasons for this feeling.

Due to the great effort of our President, Dr. Frank Phillipi, the Board of Censors resolution has been amended to insure that one member of the Board of Censors shall be elected from each congressional district. Of course, there are other changes in this amendment which I am sure that you all have read, but I feel that this is one change that is of the utmost importance in attempting to overcome some of the objections of the Membership. In addition, it gives the elected officials of the Association some input into the Board of Censors which they have not had in the past. The three top elected officials would have a vote if the amendments, as outlined by Dr. Phillipi, are passed in April. It is my sincere hope that this amendment will be adopted.



DR. CAMP

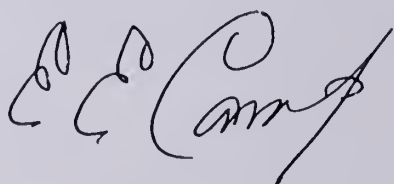
We are in the process of building a large addition to the home of the Association, which we all realize has been needed for several years. Our staff, has done a great job in carrying on the work in very crowded quarters for the past several years. It is my understanding, by the time you read this, construction will be in progress. This, I think, will tend to improve the interest of the physicians in our Association. It will certainly be nice to have a room where Doctors who visit can come in, relax, and enjoy themselves while in Montgomery.

During the past year we have also done something else that I feel is a great improvement. We have installed both incoming and outgoing Wats lines, which make the Association headquarters available to any member, free-of-charge. I don't think that we can overly-emphasize the importance of having access to free communications with our Association executives, as well as inter-communication with other physicians in the State in case we have a problem. It has been my experience that many possible disagreements can be avoided if we will just take the time to communicate with each

other before letting our tempers get out of control.

We have, I feel, the finest insurance program of any State in the entire Southeast. It is my sincere hope that all of the Doctors in the State will, as soon as practical, come into our insurance program. This is not only a matter of money but a matter of principal. Please remember that only a few months ago the two companies which write most of the insurance in this State had demanded increases in rates up to 100 per cent. They then decided, when they heard rumors the State Association was going to initiate a program of their own, they might be able to write this year's insurance with just 37 to 40 per cent increases in rates. Since our program has become a going, and I think a successful, venture, one of the companies has even decided that now they could cut their rate under our State Association rate. These facts speak for themselves. Our program is under the management of a very fine young man, Mr. Tom Rich. I hope all of you will feel free to call Mr. Rich if you have any questions concerning your insurance problems.

Last but not least, we are beginning a program of continuing education. While this is certainly a controversial subject, I feel that continuing medical education is here to stay. Therefore, let's all get behind this program and let your Officers and Censors know your feelings of how best to manage this program. I believe that we could assume that if we do not agree on a method of continuing medical education that this matter will be taken care of by people other than physicians. The matter of continuing education has a great deal of political pressure behind it and I don't think that it is going to silently steal away. Please let your officers have the benefit of your help in this educational program.



E. E. Camp, M. D., President Elect

Dr. Conwell Retires

Dr. H. Earle Conwell, Birmingham, has retired from the private practice of orthopaedic surgery at the age of 79, after being in active practice for 57 years. His activities in orthopaedic surgery were varied, and his accomplishments included a co-authored text book on fractures, entitled "The Management of Fractures, Dislocations and Sprains" of which there were seven editions, one in Spanish. This text book has been used extensively in the orthopaedic profession in the United States, Europe and South America.

Dr. Conwell served in the Medical Corps of the United States Army as a Captain on overseas service in World War I from 1917 until 1919. He became Chief of Orthopaedic Services at the Lloyd Noland Foundation and served in this capacity from 1919-1936. From 1945-1961 he served as Associate Professor of Orthopaedic Surgery, University of Alabama, later becoming Associate Professor Emeritus. Dr. Conwell's address at the present time is 1407 Windsor Circle, Birmingham, Alabama 35213.

Progress was made in 1972 toward making vasectomy reversible. A tiny, stainless steel and gold valve that can be inserted in the sperm ducts and turned on or off in a simple procedure requiring only a local anesthetic is being tested at New York Medical Center and may be available by the end of next year.

* * *

Exchange of scientific information between the United States and eastern countries began with the U.S./U.S.S.R. agreement to share cancer, heart disease and environmental studies information and has included reciprocal visits by physicians of the United States and the People's Republic of China and a subsequent American interest in acupuncture and herbal medicine as practiced in China.

* * *

The Woman's Auxiliary

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AUXILIARY PLEDGE

"I pledge my loyalty and devotion to the Woman's Auxiliary to the American Medical Association. I will support its activities, protect its reputation and ever sustain its high ideals."

Doctor's Wives Extend

Goodwill Across The Seas

Jet travel and instantaneous news releases have brought the problems of the world to our back door. No longer can we feel isolated—we have become a world community. IHA (International Health Activities) is the Auxiliary's philanthropy of service. Through this program we can fight against the hunger, pain and suffering of our world neighbors. International Health projects have been favorites of the stay-at-home physician's wife. Dr. Louis Orr visited Bangkok when he was president of the AMA, and became interested in their leprosy program. At the 1960 AMA Convention he challenged the Auxiliary to find a way to help. In June 1961 this challenge was met when the Auxiliary established the IHA committee. Collecting medical supplies for foreign missions and providing hospitality to foreign doctors and their families who were studying in American Hospitals became two of the first activities.

The program today still includes the above projects, but many others have been added. Cooperating with other women's organizations has been another good development. One such program has been with the Ninety-Nines (Women Pilots). These women transport the medical supplies we have collected to an agency who then supplies them to the people in need. This project gives flying women an opportunity to give service while they are accumulating flying hours. Our Alabama IHA chairman is Mrs. Lawrence



MRS. HANSBERRY

Michaels, a Ninety-Nine from Alexander City.

The newest project for IHA is Scholarships for Kids of International Physicians (SKIP). This project was started a year ago in an effort to alleviate physician shortage in rural India. Many rural areas and small villages of this overpopulated country have no doctors or medical facilities. However, in the large metropolitan areas there are many trained Indian doctors who would be willing to practice in these areas of need—if their children could go to schools in the city. The reason for such maldistribution is largely financial. The salary of the native physician averages \$10 per month, not

enough to permit him to follow the Indian custom of sending his children to a boarding school. Since there are no schools in the rural areas, he is forced to live in an urban area where his children can live at home while attending school.

SKIP is a scholarship program for the children of such physicians. For \$30 per month (which will completely finance a boarding school education for one child) individuals or Auxiliaries can "adopt" such a child, thereby releasing his physician father to practice in an area of greater medical need. The money can be sent monthly, quarterly, or annually. A scholarship can be started at any time. Already this new experimental program has arranged for the adoption of nine children in India. If successful in India, it will be expanded to other countries.

This is another interesting project for a

doctor and his wife. For an adoption Application form, contact our State IHA Chairman Mrs. Lawrence Michaels, 1212 Parish Loop, Alexander City 35010.

A. Rae Hansberry

A. Rae Hansberry
President

The first organ transplant surgery ever performed—a kidney transplant—is now considered a reliable clinical procedure that is included for coverage under Medicare. Equal success with other transplants, however, may depend upon finding a better way to overcome rejection without massive doses of immunosuppressive drugs.

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Editorial COMMENT

Understanding Continuing Medical Education

The initiation of a new program in a large association generally is truly understood only by that small group of individuals directly responsible for its function. This is true of the Office of Continuing Medical Education that MASA created in late 1972. Those of us affiliated with the Medical Education Committee are aware there is confusion about the purpose and responsibilities of this new office, and we will make every effort to clarify any questions from the membership. Hopefully, many questions will be resolved by this article.

The American Medical Association was founded upon the premise of improving medical education and maintaining standards for the practice of medicine. The State Medical Associations, as I understand their structure, are arms of the American Medical Association and the county societies in turn are extensions of the State Association. Together they constitute the organization of medical practice and provide the mechanism through which physicians may express voice. Although we often have good reason to disagree with their stands on different issues, they do provide the mechanism for expression and for change.

An office of education within a state medical association does not necessarily engage in producing Continuing Medical Education conferences itself, although MASA has plans for its education office to provide programs in addition to meeting national issues of medical education at the state level and in assisting hospitals, county medical societies, clinic groups, etc. in establishing their own education programs. It may of course, when appropriate, sponsor either

singularly or in conjunction with schools or appropriate groups specific continuing education programs.

At each level of medical education there are appropriate groups which look at the quality of the program. For instance, a joint liaison committee between the AMA and the AAMC looks at and accredits undergraduate medical education. The specialty societies in liaison with the AMA, accredits post graduate education for internships and residencies. The Joint Commission for the Accreditation of Hospitals has representation from the AMA, the American Hospital Association, the American College of Surgeons and the American College of Physicians, and the commission looks at the quality of care within hospitals.

The AMA has been accrediting Continuing Education Programs of teaching institutions since 1967. It can not take on the responsibility of setting criteria and accrediting community hospitals, county medical societies, and other physician groups. It has prepared guide lines and will serve as a consultant body to state medical associations so these state societies may through their offices of education or continuing education become the accrediting agency for hospitals within the state. It is now essential that MASA establish such an accrediting service and this alone would justify the Office of Education and necessary expenditures. Most hospitals within Birmingham have organized educational programs often with a full time or part time physician assigned for this purpose. Outside of the city of Birmingham there are 135 hospitals all of which within the next few years will be expected to

establish educational programs which will be acceptable through the various accrediting agencies at the national level for continuing education of physicians. Although it is anticipated that the state will call upon the medical schools of the state as a resource, it is the responsibility, at this point in time, for organized medicine to take the leadership unless physicians prefer to give up their voice entirely and allow other organizations to assume these responsibilities.

In my discussions with practicing physicians few of them are fully informed on these matters nor do they recognize the tremendous responsibility the state association has for setting criteria, not only for continuing education per se for its membership, but for developing criteria of quality health care which will have the educational element built into the actual care of the patient. This, of necessity, must be done at the point between physicians and patients whether it be hospitals, offices, clinic groups, etc. Most physicians tend to confuse an

office of education or a program of continuing education with specific courses in continuing education only, and they, likewise, tend to confuse accreditation of educational programs with requirements of continuing education for physicians. The latter are two separate but distinct issues both at the forefront of medicine today and for both of which the State Medical Society has responsibilities which must be met through its committee on education or another appropriate group.

I hope these comments have served to clarify some of the points that have been raised and that each of you will support the Office of Education of MASA and help clarify these points to other physicians. I shall be glad to discuss all these matters with any of you in greater detail at your convenience.

Margaret S. Klapper, M. D.,
Chairman
Medical Education Committee
MASA

Blood Bank Plan Initiated

A two-pronged program for improving and extending federal regulation of blood banking throughout the Nation was initiated by the Food and Drug Administration.

The plan encompasses:

1. Registration and inspection of up to 5,000 blood collection facilities not presently operating under federal licensure, and
2. Federal licensing of about 200 plasmapheresis centers engaged in the collection and processing of plasma as a source of blood products.

Charles C. Edwards, M. D., Commissioner of Food and Drugs said: "When joined with the existing interstate licensure program and with the continuing leadership and resources of such groups as the American Red Cross and the American Association of Blood Banks, the two programs we are announcing today will provide a uniform, nationwide system to more fully protect the American

public against unsafe blood and blood products.

"Such a system," he emphasized, "is essential, not only for the protection of patients against blood from unhealthy donors, but also for the protection of donors against exploitation."

The proposed new programs will be carried out by the FDA Bureau of Biologics. According to BoB Director, Dr. Harry M. Meyer, Jr., "Only 530 of the estimated three to five thousand collection facilities in this Country presently operate under federal licensure authorizing them to ship blood and blood products in interstate commerce. These licensed banks, however, supply approximately 85 per cent of whole blood collected in this Country. The other 15 per cent is collected by agencies operating intrastate and governed by State laws which vary widely. Only eight States, he pointed out, "have laws requiring licensing and inspection."

The Rx that says "Relax"

BUTISOL Sodium provides highly predictable sedative effect: minor dosage adjustments are usually all that's needed to produce the desired degree of sedation. (With 3 dosage forms and 4 strengths to make adjustments easy.)

BUTISOL Sodium offers prompt, smooth, relatively non-cumulative action: begins to work within 30 minutes...yet, because of its intermediate rate of metabolism, generally has neither a "roller-coaster" nor a "hangover" effect.

BUTISOL Sodium is remarkably well tolerated: a 30-year safety record assures you that there is little likelihood of unexpected reactions.

BUTISOL Sodium saves your patients money: costs less than half as much as most commonly prescribed sedative tranquilizers.*

These are four good reasons for prescribing BUTISOL Sodium for the many patients who need to have the pace set just a little slower. Its gentle daytime sedative action is often all that's needed to help the usually well-adjusted patient cope with temporary stress.

*Based on surveys of average daily prescription costs.

Butisol SODIUM[®]
(SODIUM BUTABARBITAL)

Contraindications: Porphyria, sensitivity to barbiturates, or susceptibility to dependence on sedative-hypnotics. **Warning:** May be habit forming. **Precautions:** Exercise caution in: moderate to severe hepatic disease; withdrawal in drug dependence or the taking of excessive doses over a long period, to avoid withdrawal symptoms; elderly or debilitated patients, to avoid possible marked excitement or depression; use with alcohol or other CNS depressants, because of combined effects. **Adverse Reactions:** Drowsiness at daytime sedative dose levels, skin rashes, "hangover" and gastrointestinal disturbances are seldom seen. **Usual Adult Dosage:** For daytime sedation, 15 mg. to 30 mg. t.i.d. or q.i.d. For hypnosis, 50 mg. to 100 mg. **Available as:** Tablets, 15 mg., 30 mg., 50 mg., 100 mg.; Elixir, 30 mg. per 5 cc. (alcohol 7%). BUTICAPS[®] [Capsules BUTISOL SODIUM (sodium butabarbital)] 15 mg., 30 mg., 50 mg., 100 mg.

McNEIL

McNeil Laboratories, Inc., Fort Washington, Pa. 19034

Cancer Detected In Animals With Nuclear Magnetic Resonance

Cancer has been detected in living animals for the first time by a technique called nuclear magnetic resonance (NMR).

Scientists at the National Bureau of Standards, U. S. Department of Commerce, in Gaithersburg, Md., have successfully detected differences between normal tissue and malignant tumor growth in living mice. They announced preliminary results on December 8 at an international biophysics conference sponsored by the New York Academy of Sciences.

NMR requires neither anesthesia nor surgery and provides almost immediate results. Although the first experiments using NMR for cancer detection in living animals were done on mice, the scientists feel that further development of the technique may possibly provide a safe, painless tool for the detection and monitoring of tumor growth in humans.

The studies were performed by NBS materials scientists Drs. Irwin D. Weisman and Lawrence H. Bennett in cooperation with Dr. Louis R. Maxwell Sr., a physicist retired from the U. S. Naval Ordnance Laboratory, and Drs. Mark W. Woods and Dean Burk of the National Cancer Institute.

NMR was first discovered in 1945 by E. M. Purcell and F. Bloch who later shared the Nobel Prize for this work. NMR has now become a well established technique with applications in analytical chemistry and solid state physics. Materials are studied by utilizing the interaction of the magnetic moment of the nucleus with magnetic fields in the material. Nuclear magnetic moments behave like weak bar magnets. When the atoms are placed in a uniform, external magnetic field, the nuclear magnetic moments align themselves parallel to the external field. The moments can be rotated away from the field direction by applying radio-frequency (rf) energy at the resonance frequency. When the rf energy source is removed, the

nuclei return to their positions parallel to the magnetic field in a characteristic, measurable time, known as the spin-lattice relaxation time (T_1). The duration of T_1 is influenced by the surroundings of the atom and the motion of other atoms. Changes in T_1 reflect changes in the atomic surroundings.

In the NBS studies, measurements on protons in tissue water of the tail were made using a conventional pulsed NMR spectrometer. The mouse's tail was placed in a wire coil, which formed the spectrometer probe. The probe was situated between the pole faces of a laboratory d-c electromagnet.

Measurements taken over a period of time revealed the growth of the tumor, a transplanted malignant melanoma. A change from normal to malignant tissue was evident in the relative change of NMR signals associated with the tumor and normal tissue relaxation times. The tumors displayed proton nuclear spin-lattice relaxation times of about 0.7 second contrasted with the simultaneously measured normal tail tissue proton relaxation times of about 0.3 second. The analysis was performed on DBA mice.

Using magnets with larger sample space, experiments could be performed on other animals and even humans. Coils of different designs might be adapted to fit various parts of the body. If this technique can be developed and applied at a practical level, competent technicians should be able to test a patient in a matter of minutes. Perhaps NMR could take its place beside thermography and radiography as a nonsurgical technique for cancer detection and the analysis of cancer growth rates.

1. Weisman, I. D., Bennett, L. H., Maxwell, L. R. Sr., Woods, M. W., Burk, D., Recognition of cancer in vivo by nuclear magnetic resonance, *Science* 178 (22 December, 1972).



"For generations my family has insisted on Donnagel[®]-PG," says active young matron Mrs. T. Farnsworth Lipp (of the Upper Lipps), shown here with her charming son. "All the benefits of paregoric — without the unpleasant taste, don't you know? And Junior thinks Donnagel-PG tastes so much like bananas that I never worry about a slip between spoon and Lipp."

A Matter of Taste

With or without a silver spoon, a most tasteful solution in treating acute, non-specific diarrhea: all the benefits of paregoric, without the unpleasant taste. Donnagel[®]-PG treats accompanying cramping, tenesmus, and nausea as well as the diarrhea itself. Instead of unpleasant-tasting paregoric, it contains the therapeutic equivalent, powdered opium, to promote the production of formed stools and lessen the urge. And it provides the analgesic-detoxicant effects of kaolin and pectin, plus the antispasmodic benefits of scopolamine alkaloids. And a good banana flavor to baby any taste.

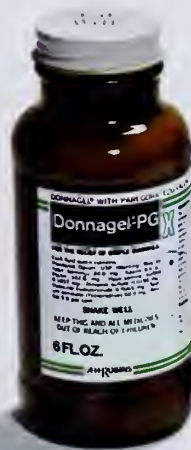
Donnagel[®]-PG

Donnagel with paregoric equivalent

Available on oral prescription or without prescription under limited circumstances as modified by applicable state law.

Each 30 cc. contains: Kaolin, 6.0 g.; Pectin, 142.8 mg.; Hyoscyamine sulfate, 0.1037 mg.; Atropine sulfate, 0.0194 mg.; Hyoscine hydrobromide, 0.0065 mg.; Powdered opium, USP, 24.0 mg. (equivalent to paregoric 6 ml.) (Warning: may be habit forming); Sodium benzoate (preservative), 10 mg.; Alcohol, 5%. A.H. Robins Company, Richmond, Virginia 23220

A-H-ROBINS



IN WINTER COUGHS



CLEAR THE TRACT WITH THE ROBITUSSIN[®] LINE

The coughing season is here again. Time to rely on the four Robitussins and Cough Calmers to help clear the lower respiratory tract. All contain glyceryl guaiacolate, the efficient expectorant that works systemically to help increase the output of lower respiratory tract fluid. The enhanced flow of less viscid secretions soothes the tracheobronchial mucosa, promotes ciliary action, and makes thick, inspissated mucus less viscid and easier to raise. Available on your prescription or recommendation.

For coughs of colds and "flu"

ROBITUSSIN[®]

Each 5 cc. contains:

Glyceryl guaiacolate 100 mg.
Alcohol, 3.5%

For unproductive allergic coughs

ROBITUSSIN A-C[®]

Each 5 cc. contains:

Glyceryl guaiacolate 100 mg.
Pheniramine maleate 7.5 mg.
Codeine phosphate 10.0 mg.
(warning: may be habit forming)
Alcohol, 3.5%

Non-narcotic for 6-8 hr. cough control

ROBITUSSIN-DM[®]

Each 5 cc. contains:

Glyceryl guaiacolate 100 mg.
Dextromethorphan hydrobromide 15 mg.
Alcohol, 1.4%

Robitussin-DM in solid form for "coughs on the go"

COUGH CALMERS[®]

Each Cough Calmer contains:

Glyceryl guaiacolate 50 mg.
Dextromethorphan hydrobromide 7.5 mg.

Relieves cough, clears sinuses and nasal passages—
keeps them "drip-dry" but not bone dry

ROBITUSSIN-PE[®]

Each 5 cc. contains:

Glyceryl guaiacolate 100 mg.
Phenylephrine hydrochloride 10 mg.
Alcohol, 1.4%

the Robitussin[®]
-Tract[®] Formulation
Treats Your Patient's
Dual Coughing

	Expectorant- Demulcent	Cough Suppressant	Antihistamine	Long-Acting (6-8 hours)	Nasal Sinus Decongestant	Non-Narcotic
ROBITUSSIN [®]	●					●
ROBITUSSIN A-C [®]	●	●	●			●
ROBITUSSIN-DM [®]	●	●		●		●
ROBITUSSIN-PE [®]	●				●	●
COUGH CALMERS [®]	■	■		■		■

handy chart as a guide in selecting the formula that provides the benefits you want for your patient.

A-H-ROBINS

A. H. Robins Company, Richmond, Virginia 23220

PHYSICIAN PLACEMENT SERVICE IN ALABAMA

The Physician Placement Service of the Medical Association of the State of Alabama is designed to assist both physicians and communities. MASA members having knowledge of practice opportunities or wishing to relocate their own practices are urged to communicate with the Placement Service. For further information: write Mr. Emmett Wyatt, Executive Assistant, Medical Association of the State of Alabama, 19 South Jackson Street, Montgomery, Alabama 36104, or Telephone 263-6441.

Locations Wanted

Anesthesiology—

Age 54; Medical College of Alabama, 1949; Board certified; seeking associate or institutional practice. LW-2/9

Age 46; King's College Hospital, London, England 1952; Board certified; seeking solo or group practice. LW-2/10

General Practice—

Age 27; Univ. of Tennessee, 1970; seeking group practice; Available July 1973. LW-3/1

Age 31; University of Kansas, 1966; seeking associate or group practice; Available July 1973. LW-3/2

Age 32; University of Texas, Southwestern, 1968; seeking institutional practice; Available January 1973. LW-3/3

Age 41; Temple University, 1963; National Board; Board eligible; seeking associate or group practice; Available December 1972. LW-3/4

Age 45; University of Alabama, 1963; Available July 1973. LW-3/9

Age 31; St. Louis University, 1966; National Board; seeking associate practice. LW-3/10

Age 32; University of Missouri, 1965; National Board; Board eligible, 1974; seeking solo, associate or group practice; Available Spring of 1973.

Internal Medicine—

Age 31; University of Miami, 1964; Board certified, seeking group or institutional practice. Available January 1973. LW-4/7

Age 30; Univ. of Virginia, 1967; Board eligible; seeking group practice; Available June 30, 1973. LW-4/15

Age 30; Vanderbilt University, 1967; National Board; Board eligible; seeking solo, associate, or group practice; Available July, 1973. LW-4/16

Age 34; Georgetown University, 1964; Board certified; seeking group, associate or institutional practice; Available July 1973. LW-4/18

Age 40; University of Kentucky, 1969; Board eligible; seeking solo, associate, group or institutional practice; Available July 1973. LW-4/19

Age 32; Temple University, 1966; National Board, Board eligible; seeking group practice; Available late summer 1973. LW-4/19

Age 38, Ohio State University, 1963; National Board, Board eligible; seeking group or institutional practice; Available September, 1973. LW-4/22

Age 31; Vanderbilt University, 1967; National Board, Board eligible; seeking associate or group practice; Available July 1973. LW-4/23

Neurology

Age 30; Northwestern University, 1967; National Board; Board eligible; seeking solo, associate, or group practice; Available June 1973. LW-5/1

Age 28; University of Pennsylvania, 1969; National Board, Board eligible; seeking associate or group practice. LW-5/6

Ophthalmology—

Age 31; Chicago Medical School, 1966; National Board; seeking associate or group practice; Available July, 1973. LW-6/6

Age 31; Bowman Gray, 1967; Board eligible; seeking solo, associate or group practice; Available June 30, 1973. LW-6/10

Age 31; S.U.N.Y., Downstate Medical School 1966; National Board, Board certified; seeking solo or group practice; Available July 1973. LW-6/19

Orthopedic Surgery—

Age 31; University of Alabama, 1966; National Board; Available July, 1973. LW-14/4

Age 31; Baylor, 1966; Board eligible; seeking associate practice; available July, 1973. LW-14/5

Age 30; University of Illinois, 1967; Board eligible; seeking group or associate practice; Available June 1974. LW-14/8

Age 38; Loyola University, 1959; Board eligible; seeking solo or associate practice; Available December 1972. LW-14/9

Age 34; University of Michigan, 1964; Board eligible; seeking solo, associate, group or industrial practice; Available January 1974. LW-14/20

Age 32; Emory University, 1966; Board eligible; seeking associate or group practice; Available August 1973. LW-14/21

Otolaryngology—

Age 30; Medical College of Georgia, 1966; Board certified; seeking solo, associate or group practice; Available summer, 1973. LW-16/3

Age 30; Creighton Medical College, 1966; National Board, Board certified; seeking solo, associate or group practice; Available July 1973. LW-16/4

Pathology—

Age 32; Bowman Gray School of Medicine, 1965; Board certified; seeking Hospital practice with or without associate. LW-8/12

Age 36; Creighton University, 1967; National Board, Board eligible; seeking solo, associate or group practice; Available December 1972. LW-8/15

Pediatrics

Age 30; Kansas University, 1968; National Board, Board eligible; seeking associate or group practice; Available August 1973. LW-9/9

Radiology—

Age 43; Univ. of Tennessee, 1962; Available July 1, 1973. LW-10/10

Age 33; Univ. of Kentucky, 1966; Board eligible; seeking solo, associate, or group practice; Available November, 1972. LW-10/11

Surgery—

Age 33; University of Maryland, 1965; seeking solo, group, or associate practice; Available July 1973. LW-11/7

Age 35; Univ. of Oklahoma, 1964; Board eligible; seeking associate or group practice; Available Jan. 1, 1973. LW-11/14

Age 42; Tulane University, 1955; Board certified; seeking associate, group or industrial practice; Available January 1973. LW-11/16

Urology—

Age 36; Louisiana State University Medical School, 1961; Board eligible; seeking associate practice; Available December, 1972. LW-12/4

Age 35; Univ. of Miami, 1964; National Board; Board eligible; seeking associate, group, or institutional practice; Available Jan. 1973. LW-12/5

Age 32; University of Kentucky, 1968; Board eligible; seeking solo, Associate or group practice; Available July 1973. LW-12/8

Age 32; University of South Carolina, 1966; Board eligible; seeking associate or group practice; Available August 1973. LW-12/9

Physicians Wanted

Special Openings—

Wanted, qualified physicians in either OB-GYN, Internal Medicine, or Thoracic Vascular Surgery, to practice with group clinic. The clinic is a 16 man multi-specialty group, and is located in a city of 35,000 with a trade area of 160,000. Excellent recreational facilities and educational opportunities in the area. PW-14

Opportunity for Internist, Board Certified or eligible, interested in Cardiology, in town of 11,000 population—service area 40,000—south Alabama. Modern 86-Bed (JCAH) general hospital with 8-Bed Combination Intensive and Coronary Care Unit under construction. Seven GP's, Certified Surgeon, Radiologist—excellent city school system. PW-15

Internists—one or two needed in University town of 40,000 plus population in Southeast Alabama—Young vigorous multi-specialty group—Generous initial salary and early partnership. PW-16

Internists, Board-certified or eligible. One needed now and another in 1 or 2 years. For early partnership with internist in south Alabama city of 40,000 plus population. New office building adjacent to 181-bed hospital. Practice largely hospital in-patient and Cardiology. PW-21

Opportunity for a Board certified or eligible surgeon to be associated with a Board surgeon in city of 150,000 population. PW-21/1

General Practitioner or Internist for associate or separate practice in Birmingham. Modern office space and excellent hospital facilities. PW-26

Internist wanted, Board certified, Town of 10,000 population, Southwest Alabama. New 51-bed general hospital, I.C.U. Physicians: 5 GP's, Certified Surgeon and Radiologist. Within easy access, excellent fresh and salt water fishing, hunting including deer and turkey. Public and private schools. One hour drive from two metropolitan areas. PW-18

Wanted, internists, generalists, radiologist, orthopedist, general surgeons, town of 15,000 population in county of 45,000 population in southeast Alabama. Attractive for a group setup. High income area and marked scarcity of physicians. Excellent schools and recreational facilities. Newly expanded hospital. PW-17

Wanted: Immediately. Pediatrician to replace recently deceased partner in northeast Alabama. Enter busy practice in a predominantly GP area. Enjoy rural, quiet living with nearby scenic and recreational facilities. Salary, practice, everything negotiable. PW-19

Pinworm therapy is often a family affair



Contraindications: History of hypersensitivity to thiabendazole.

Warnings: If hypersensitivity reactions occur, drug should be discontinued immediately and not resumed. Rarely, erythema multiforme has been associated with thiabendazole therapy; in severe cases (Stevens-Johnson syndrome), fatalities have occurred. Because CNS side effects may occur quite frequently, activities requiring mental alertness should be avoided. Safe use in pregnancy or lactation has not been established.

Precautions: Ideally, supportive therapy is indicated for anemic, dehydrated, or malnourished patients prior to initiation of anthelmintic therapy. In presence of hepatic or renal dysfunction,

patients should be carefully monitored.

Adverse Reactions: Most frequently encountered are anorexia, nausea, vomiting, and dizziness. Less frequently, diarrhea, epigastric distress, pruritus, weariness, drowsiness, giddiness, and headache have occurred. Rarely, tinnitus, hyperirritability, numbness, abnormal sensation in eyes, blurring of vision, xanthopsia; hypotension, collapse; enuresis; transient rise in cephalin flocculation and SGOT; perianal rash, cholestasis and parenchymal liver damage; hyperglycemia; transient leukopenia; malodor of the urine, crystalluria, hematuria; appearance of live *Ascaris* in the mouth and nose. Hypersensitivity reactions

A New Dosage Form:

Chewable Tablets 500 mg Mintezol[®] (THIABENDAZOLE | MSD)



so easy to take
everyone in the family
can keep to the
regimen you prescribe

Indications: fever, facial flush, chills, conjunctival injection, edema, anaphylaxis, skin rashes, erythema multiforme (including Stevens-Johnson syndrome), and lymphadenopathy.
Supplied: Chewable tablets, containing 500 mg thiabendazole, in boxes of 36, strip packaged, individually foil wrapped; Suspension, containing 500 mg thiabendazole per 5 cc, in bottles of 120 cc.

For more detailed information, consult your MSD representative or see full prescribing information. Merck Sharp & Dohme, Division of Merck & Co., Inc., West Point, Pa. 19486

MSD
MERCK
SHARP
&
DOHME

addendum

INDICATION | DOSAGE SCHEDULE

MINTEZOL[®] (Thiabendazole, MSD) has demonstrated effectiveness against a broad spectrum of nematode infections. Dosages are weight related. For your convenience, the information in the weight-dose chart below is included in the full prescribing information and in the 1973 edition of PDR.

The recommended maximum daily dose of MINTEZOL is 3 g (6 tablets).

MINTEZOL should be given after meals if possible. Dietary restriction, complementary medications, and cleansing enemas are not needed.

The usual dosage schedule for all conditions is two doses per day. The size of the dose is determined by the patient's weight.

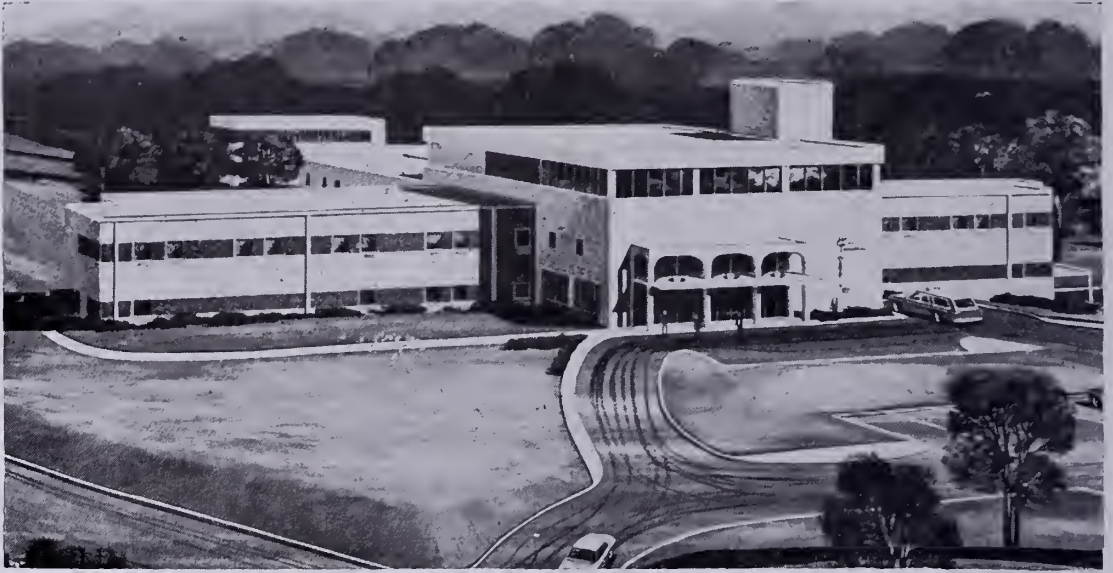
Weight-dose chart:

WEIGHT (lb)	EACH DOSE (g)	TABLETS
25	0.25	½
50	0.5	1
75	0.75	1½
100	1.0	2
125	1.25	2½
150 & over	1.5	3

The regimen for each indication follows:

INDICATION	REGIMEN	COMMENTS
Pinworm disease	Two doses per day for 1 day. Repeat in 7 days. This regimen is designed to reduce the risk of reinfection.	If this is not practical, give 2 doses per day for 2 successive days.
Threadworm,* large roundworm,* hookworm,* and whipworm* disease	Two doses per day for 2 successive days.	A single dose of 20 mg/lb or 50 mg/kg may be employed as an alternative schedule, but a higher incidence of side effects should be expected.
Creeping eruption	Two doses per day for 2 successive days.	If active lesions are still present 2 days after completion of therapy, a second course is recommended.
Symptoms of trichinosis* during the invasive phase of the disease	Two doses per day for 2 to 4 successive days according to the response of the patient.	The optimal dosage for the treatment of trichinosis has not been established.

*Clinical experience with thiabendazole for treatment of each of these conditions in children weighing less than 30 lb has been limited.



Hill Crest HOSPITAL

For Intensive Treatment of Psychiatric Disorders

This 113-bed non-governmental psychiatric hospital provides modern facilities for diagnosis and treatment of patients with all degrees of illness, including those who show severely disturbed behavior. Alcoholic and drug abuse patients are also accepted.

In addition to care by psychiatrists and by consultants in all medical specialties, the treatment program includes occupational, recreational, and physical therapy, social services, and tutoring. Emphasis is on short-term, intensive treatment of voluntary patients.

Hill Crest is a member of: American Hospital Association, National Association of Private Psychiatric Hospital, Alabama Hospital Association, Birmingham Regional Hospital Council.

Accredited by Joint Commission on Accreditation of Hospitals. Medicare Approved. Blue Cross Participating Hospital.

PSYCHIATRISTS:

James K. Ward, M. D.
Hardin M. Ritchey, M. D.
F. Joseph Nuckols, M. D.
James A. Greene, M. D.
Charles W. Moorefield, M. D.

ADMINISTRATOR:

Robert V. Sanders

DIRECTOR OF SOCIAL SERVICES:

James T. Kemp, A. C. S. W.

HILL CREST HOSPITAL

Hill Crest Foundation, Inc.

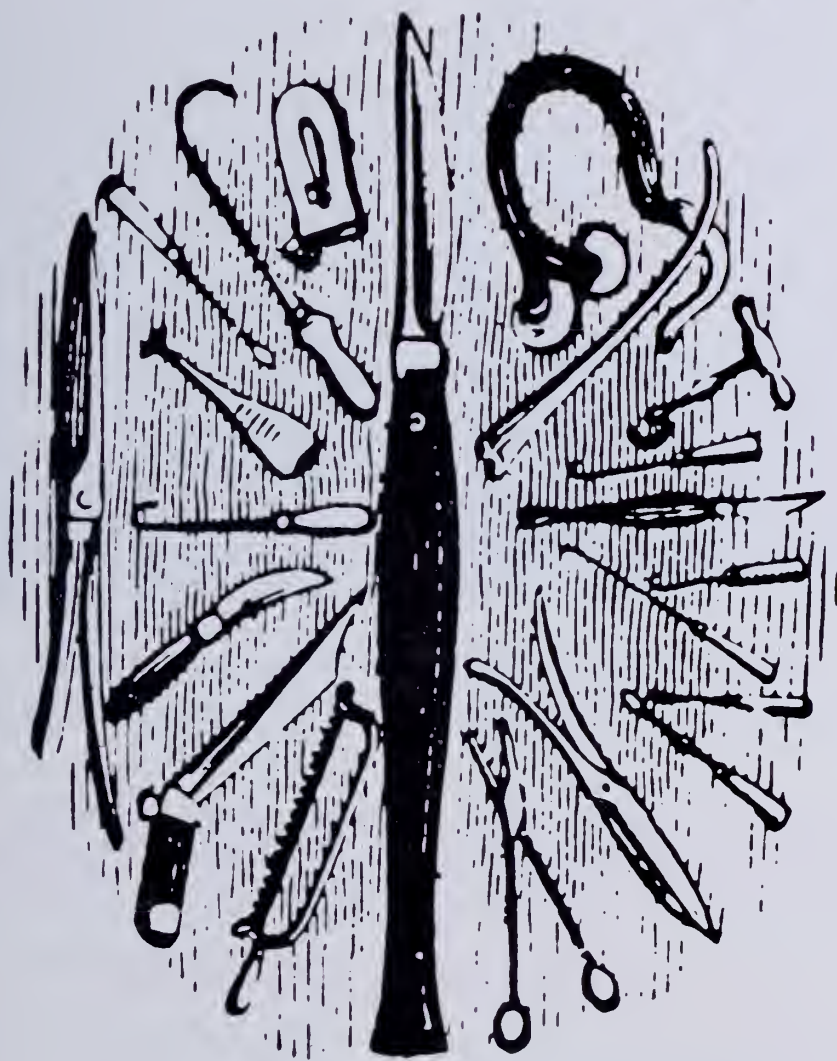
6869 Fifth Avenue South

Birmingham, Alabama 35212

PHONE: 205-836-7201

In 1852 it was reported that practicing medicine in the southern section of Alabama were "40 regular practitioners, 2 hemeopathists and hydropathists, 3 root doctors and Thompsonians, 3 general quackery and one idio-electopathist."

BLUE CROSS-BLUE SHIELD OF ALABAMA



Diet And Migraine Headaches

Studies conducted at the Haddassah-Hebrew University Medical Center in Jerusalem, Israel, indicate that migraine headache victims may soon be able to alleviate their pain with a diet of low protein and aspartic acid.

Dr. Alexander Russell, chief of pediatrics at the medical center, says the migraine problem begins when too much ammonia circulates in the victim's blood. That person's natural defenses then go into action and close down the blood flow to the delicate vessels of the eyes and brain. This closing of the vessels is what brings on the blinding pain.

According to the National Society for Medical Research, Dr. Russell told a seminar audience at the University of Minnesota that people with that type of migraine problem develop the ammonia excess in the blood when their livers have to deal with too much protein or with some foods such as chocolate.

The well-known pediatrician pointed out that further tests with animals and humans are necessary before the theory can be translated into medical practicality.

It was demonstrated at Cook County Hospital in Chicago that strains of normal intestinal bacteria (*Escherichia coli*) produce the toxin causing acute diarrhea—a debilitating and often lethal illness—in infants and possibly in adults. Researchers are looking for an anti-toxin to combat the disease.

* * *

Prostaglandin $\text{PGF}_2\alpha$ has been proved an effective abortifacient, introducing abortion in a shorter time than the previously used hypertonic saline.

Rondomycin (methacycline HCl)

CONTRAINDICATIONS: Hypersensitivity to any of the tetracyclines.

WARNINGS: Tetracycline usage during tooth development (last half of pregnancy to eight years) may cause permanent tooth discoloration (yellow-gray-brown), which is more common during long-term use but has occurred after repeated short-term courses. Enamel hypoplasia has also been reported. **Tetracyclines should not be used in this age group unless other drugs are not likely to be effective or are contraindicated. Usage in pregnancy.** (See above **WARNINGS** about use during tooth development.)

Animal studies indicate that tetracyclines cross the placenta and can be toxic to the developing fetus (often related to retardation of skeletal development). Embryotoxicity has also been noted in animals treated early in pregnancy.

Usage in newborns, infants, and children. (See above **WARNINGS** about use during tooth development.)

All tetracyclines form a stable calcium complex in any bone-forming tissue. A decrease in fibula growth rate observed in premature infants given oral tetracycline 25 mg/kg every 6 hours was reversible when drug was discontinued.

Tetracyclines are present in milk of lactating women taking tetracyclines.

To avoid excess systemic accumulation and liver toxicity in patients with impaired renal function, reduce usual total dosage and, if therapy is prolonged, consider serum level determinations of drug. The antianabolic action of tetracyclines may increase BUN. While not a problem in normal renal function, in patients with significantly impaired function, higher tetracycline serum levels may lead to azotemia, hyperphosphatemia, and acidosis.

Photosensitivity manifested by exaggerated sunburn reaction has occurred with tetracyclines. Patients apt to be exposed to direct sunlight or ultraviolet light should be so advised, and treatment should be discontinued at first evidence of skin erythema. **PRECAUTIONS:** If superinfection occurs due to overgrowth of nonsusceptible organisms, including fungi, discontinue antibiotic and start appropriate therapy.

In venereal diseases, when coexistent syphilis is suspected, perform darkfield examination before therapy, and serologically test for syphilis monthly for at least four months.

Tetracyclines have been shown to depress plasma prothrombin activity; patients on anticoagulant therapy may require downward adjustment of their anticoagulant dosage.

In long-term therapy, perform periodic organ system evaluations (including blood, renal, hepatic).

Treat all Group A beta-hemolytic streptococcal infections for at least 10 days. Since bacteriostatic drugs may interfere with the bactericidal action of penicillin, avoid giving tetracycline with penicillin.

ADVERSE REACTIONS: Gastrointestinal (oral and parenteral forms): anorexia, nausea, vomiting, diarrhea, glossitis, dysphagia, enterocolitis inflammatory lesions (with monilia overgrowth) in the anogenital region.

Skin: maculopapular and erythematous rashes; exfoliative dermatitis (uncommon). Photosensitivity is discussed above (See **WARNINGS**).

Renal toxicity: rise in BUN apparently dose related (See **WARNINGS**).

Hypersensitivity: urticaria, angioneurotic edema, anaphylaxis, anaphylactoid purpura, pericarditis, exacerbation of systemic lupus erythematosus.

Bulging fontanels, reported in young infants after full therapeutic dosage, have disappeared rapidly when drug was discontinued.

Blood: hemolytic anemia, thrombocytopenia, neutropenia, eosinophilia.

Over prolonged periods, tetracyclines have been reported to produce brown-black microscopic discoloration of thyroid glands; no abnormalities of thyroid function studies are known to occur.

USUAL DOSAGE: Adults—600 mg daily, divided into two or four equally spaced doses. More severe infections: an initial dose of 300 mg followed by 150 mg every six hours or 300 mg every 12 hours. Gonorrhea: In uncomplicated gonorrhea, when penicillin is contraindicated, "Rondomycin" (methacycline HCl) may be used for treating both males and females in the following clinical dosage schedule: 900 mg initially, followed by 300 mg q.i.d. for a total of 5.4 grams.

For treatment of syphilis, when penicillin is contraindicated, a total of 18 to 24 grams of "Rondomycin" (methacycline HCl) in equally divided doses over a period of 10-15 days should be given. Close follow-up, including laboratory tests, is recommended.

Eaton Agent pneumonia: 900 mg daily for six days.

Children—3 to 6 mg/lb/day divided into two to four equally spaced doses.

Therapy should be continued for at least 24-48 hours after symptoms and fever have subsided.

Concomitant therapy: Antacids containing aluminum, calcium or magnesium impair absorption and are contraindicated. Food and some dairy products also interfere. Give drug one hour before or two hours after meals. Pediatric oral dosage forms should not be given with milk formulas and should be given at least one hour prior to feeding.

In patients with renal impairment (see **WARNINGS**), total dosage should be decreased by reducing recommended individual doses or by extending time intervals between doses.

In streptococcal infections, a therapeutic dose should be given for at least 10 days. **SUPPLIED:** "Rondomycin" (methacycline HCl) 150 mg and 300 mg capsules, syrup containing 75 mg/5 cc methacycline HCl.

Before prescribing, consult package circular or latest PDR information.

Rev. 12/71



WALLACE PHARMACEUTICALS
CRANBURY, NEW JERSEY 08512



**When the focus is on bronchitis due to
susceptible strains of *H. influenzae* and pneumococci***

Rondomycin[®] 300 mg.

[methacycline HCl] Capsules

Delivers from the very first dose:

**Studies show that after the first dose serum levels rapidly rise above
minimum *in vitro* inhibitory concentrations**

*Since many strains are known to be resistant, routine sensitivity testing is recommended.



**Not too little, not too much...
but just right!**

"Just right" amounts of Ilosone Liquid 250
can be dispensed easily from the pint bottle in *any* quantity
you specify to meet your patients' precise needs—
without regard to package size.

ready-mixed
Ilosone[®] Liquid 250

Erythromycin Estolate

(equivalent to 250 mg. of base per 5-ml. teaspoonful)

*Additional information available
to the profession on request.
Eli Lilly and Company
Indianapolis, Indiana 46206*



100204

THE JOURNAL

of

THE MEDICAL ASSOCIATION OF THE STATE OF ALABAMA

Published Under the Auspices of the Board of Censors

Volume 42

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The A, B, C's of Mechanical Ventilation

Part I—Flow Through A Tube

D. S. Tysinger, Jr., M. D.

Dothan, Alabama

In breathing the first thing that must be understood is how to make air flow through a tube and the factors that effect it. Obvious factors that effect flow through a tube are:

- 1) tube size
- 2) tube length
- 3) surface resistance
- 4) pressure differences at the two ends
- 5) gas density and viscosity

Gas density in inhalation therapy is effected by:

- 1) temperature—Cool gases are more dense than hot gases. Cool gases are more viscous and cause more resistance to flow than hot gases.
- 2) altitude—(barometric pressure) Molecular concentration and density of gases at sea level are more dense than gases at high altitudes.

These factors as they actually effect ventilation should be understood.

To make air flow through a tube, pressure above ambient must be applied at one end, a vacuum (subambient pressure) must be applied at the other, or both. If the air is heated or cooled at one end in relation to the other, flow will occur. Flow will be from the cool to the hot. This flow, however, is due to the change in pressure and density due to the temperature. This is due

to a pressure change at the two ends. There must be a pressure difference at the two ends for flow to occur.

The pressure difference does not produce the same flow each time. A pressure of X may cause Y flow at sea level with a barometric pressure of 29.92 inches of mercury (760 mmHg.) and a temperature of 59°F. If the same tube is taken to 1,800 feet only one-half the barometric pressure will be present (14.96 inches of mercury). The temperature will be lower approximately -9°F. The air is less dense due to the barometric pressure change. Here, X pressure will cause a greater flow than Y as it would at sea level. This is because there are fewer molecules of air per unit volume. In a hyperbaric chamber at three atmospheres, (three times normal barometric pressure) with the same pressure applied, the temperature remaining constant, less flow will occur. This is due to the greater molecular concentrations per unit volume.

Pressure, then, is necessary to cause flow. The amount of pressure is proportional to, but not equal to, the volume flow. Exacting flow rates cannot be given for pressures applied unless barometric pressure and temperature are taken into account. Average flows within fixed limits can be set down.

As an example, at 375 feet with a barometric pressure of 29.92 and a room temperature of 72°F, it requires 5.2 cmH₂O pressure

to cause one liter a minute flow out the other end of a 2.5mm nasal canula. To cause two liters a minute flow, it requires 7.5 cmH₂O pressure. It takes 26 cm H₂O pressure to cause five liters per minute flow. It requires 81 cmH₂O pressure to cause ten liters per minute flow. Go to a three millimeter tube with the same conditions prevailing and it only takes 0.5 cmH₂O pressure for one liter a minute flow; 4.75 cmH₂O pressure to cause a liter per minute flow; and 16 cmH₂O pressure to cause a 10 liter per minute flow.

Now, if a 10 l/min flow is desired and only sufficient pressure is added to cause 5 l/min., then only 5 l/min. will flow. There must be sufficient pressure applied at the one end to cause the flow rate desired out the other. Volume delivery is due to the flow rate through the tube over the period of time. Five liters a minute for five minutes will deliver 25 liters total.

If five liters a minute are flowing through a tube and pressure begins to develop at the delivery end, then the pressure difference between the two ends is reduced and flow rate is reduced. For example, the 2.5mm tube at 5 l/min. requires a pressure difference of 26.5 cmH₂O pressure. The flow out the delivery end is without pressure. As pressure is produced at the delivery end, it reduces the pressure difference between the two ends of the tube. As pressure builds up this pressure difference drops to 18.5 cmH₂O pressure, thus, flow decreases to 4 l/min. As pressure continues to build up at the delivery end and reduces the pressure difference to 11.5 cmH₂O, flow drops to 3 l/min. This continues until pressure difference drops to zero and effective flow stops. In this way pressure through the tube into a fixed elastic container is flow sensitive due to the pressure reduction between the two ends and its effect on flow rate.

If it is desired to deliver pressure beyond the tip of the delivery tube then the flow rate and pressure must be controlled separately. When pressure is increased above that required for the flow rate desired,

pressure builds up at the delivery end so no increase in flow rate will occur, and this extra pressure will be applied as pressure not as increased flow rate. With pressure and flow rate controlled separately then pressure greater than that to cause flow will deliver the pressure difference as pressure to the delivered gas. For example, in the 2.5mm tube, if 5 l/min. flow is desired at 15 cmH₂O pressure it takes 26.5 cmH₂O pressure to deliver 5 l/min.; so $26.5 + 15 = 41.5$ cmH₂O pressure with a fixed flow of 5 l/min. to deliver 5 l/min. at 15 cmH₂O. Had just a pressure of 41.5 cmH₂O been applied a flow rate of 6.5 l/min. at no pressure would have been delivered. As pressure builds up at the delivery end, flow rate will slow with the pressure difference at the two ends at the moment the pressure difference is 26.5 cmH₂O the flow rate will be 5 l/min. and only at that time.

The pressure develops because of the frictional resistance between the tube wall and the air flow over it. At very low flows, frictional resistance is small. Movement of air in the center of the tube is faster than that at the periphery. As flow rate increases, the frictional resistance causes the air at the sides in contact with the tube to become rough and jerky (turbulence). The air in the center flows faster. As flow rate increases more air in contact with the wall becomes turbulent with slow flow while the central core gets smaller and moves faster. Finally, the flow rate reaches a point that the tube is full of turbulent air being pushed through the tube.

To plot a curve of flow rate through a tube three portions of a curve can be identified. The first is where flow occurs without any real turbulence where air and tube meet. At these flow rates there is frictional slowing of the outer portion of air but not real turbulence. This portion of the curve is very flat. Next, as the air passing against the tube wall becomes turbulent the slope of the curve increases. Here more pressure increase is required to cause equivalent increases in flow. Finally, a flow rate is

reached at which all the air is turbulent and great pressures are required to cause slight increases in flow rate.

Pressure difference at the two ends then is a reflection of the turbulence present in a tube. The higher the pressure the more turbulent the air flow. This is not too significant where ventilation is the only aim. Pressure will cause air flow and ventilate. The particles that are used in inhalation therapy are heavy in relation to air and are easily dislodged from the air. Particles in the turbulent air next to the tube wall are bounced out of the air onto the surface. Only the central nonturbulent portion of flow will carry particles through the tube. As flow rate increases, turbulence increases (as noted by pressure required). The central core of smooth flow decreases and particle volume delivery through the tube is decreased. As total tube flow becomes turbulent no delivery is effected, all particles rainout and become large blobs rolled along the tube surface if not absorbed.

One other point about ventilating above the tube turbulent point is that water which is a vapor is squeezed out by the pressure in the tube. Air delivered beyond the tube is, now that pressure is released, 100 per cent humidified. It may have been 100 per cent humidified before entry into the tube, but leaves minus the humidity squeezed out by the pressure. Thus, where high ventilatory pressures are used it is impossible to deliver completely humidified air, much less particulate material.

Tube length has a direct relation to the beginning turbulence and maximum turbulence points. As the tube gets longer both of these points occur at lower flow rates. Also, as the tube gets longer, higher pressures are required to cause the same flow rate. This is due to the increased surface resistance produced by the increased length.

Now, in the ventilation of an individual adult, the larynx, trachea, primary, secondary, and tertiary bronchi act as tubes. Measuring below the larynx through the

tertiary bronchi this tube is 21.5-to 23 cm long, with an average total volume of 1 to 2 ml/cm of tube or total volume of 43 to 46 ml., for ease of memory 45 to 50ml. From this point on to the alveolus tubes dilate and elongate and act as a balloon rather than as tubes with breathing. For those who doubt that bronchial tubes dilate and elongate, the number of branching tubes, the volume they will hold and the flow rates still make this a balloon area. Flow rate through the trachea is 100 to 150 ml/cm/sec. Through the terminal bronchioles it is 0.18 ml./cm/sec., and through the alveolar ducts it is 0.035 ml./cm/sec. Whether they dilate as they elongate is an insignificant point. The total number causes the balloon area to be what it is. Since the outer two centimeters of the lungs are all that is purely alveolus contents, for lungs to collapse the bronchial tubes must be elastic. The trachea, primary, secondary, tertiary and quaternary bronchi are not elastic and do not dilate or elongate. Those from this point on, however, have to dilate and elongate or the lungs would not expand and collapse.

Thus, it can be seen that a tube 1.5 to 2 cm in diameter roughly 20 to 25 cm long with an average volume of 45 to 50ml. must be ventilated to get air and particles to the alveolus. This tube like any other has a turbulence beginning point and a complete turbulent point. In this system the second one-half of the tube has added turbulence factors of multiple branching. There are two primary bronchi, 12 secondary bronchi, and 100 tertiary bronchi in the second 10cm of the tube. Thus, though volume is not much greater surface area is much larger. For this reason this tube has a lower beginning and maximum turbulence point than a simple 2cm diameter 21cm long tube. The maximum turbulence point is usually slightly less than two times normal flow rate for the trachea.

The normal individual produces about 5 to 7cmH₂O vacuum (subambient pressure) in the alveolar area to cause air flow into the lungs. This causes a flow rate of 5 to 10 l/min. Inspiration is usually one-third

and expiration two-thirds of the time. The 5 to 10 l/min. flow is delivered in one-third of the minute. A flow rate of 15 l/min. to 30 l/min. The reason it takes longer to get the air out than in is that from the alveolus to the tertiary bronchus bronchial tubes are reducing in diameter and length which gives this area the characteristics of tubes on expiration with a lower turbulence minimum and maximum. Since the above ambient pressure on expiration is approximately the same as the subambient pressure on inspiration and with the lower turbulence points, now this pressure causes a slower flow rate. Thus, a longer time is required to get the same total volume out than it did to get it in.

As problems arise along the tubular system, greater vacuum (subambient) and above ambient pressures must be made at the alveolar level to cause the same volume delivery over the same period. This is especially true of disease in the tubules beyond the tertiary bronchi. Here, as they become edematous and stiff they act more like tubes and less like balloons. This markedly lowers the turbulence points and thus requires greater alveolar pressures to ventilate (20 to 40 cmH₂O pressure).

The use of mechanical equipment to ventilate a normal lung (one with the patient breathing normally and producing + and -5cmH₂O pressure at the alveolar level) is to (1) apply a *volume fixed or unlimited*; (2) a *flow rate fixed or controllable*; (3) for a *time fixed or unlimited*; (4) which *produces a pressure preset or unlimited*. To understand what is happening, forget machine types for the present.

There is no way to mechanically increase flow volume at the mouth without producing pressure. An increased flow rate at the mouth must have a sufficient pressure to cause its delivery. If a pressure is applied at the mouth a flow rate will develop if flow volume is available. The pressure that determines the flow rate is the pressure applied at the mouth plus the vacuum developed in the alveolus. Twenty cmH₂O pressure at the

mouth and five cmH₂O vacuum developed in the alveolus results in 25 cmH₂O pressure to cause flow. If flow rate is restricted below what 25cmH₂O will cause then the pressure difference between what is needed to cause flow and what is produced will be used to distend at the delivery end, after flow rate has been reached.

Now, if a large vacuum (subambient pressures) is produced at the alveolar level say 20 to 40cmH₂O as it is in status asthmaticus and obstructive disease, and if 20cmH₂O pressure is applied at the mouth much higher pressure difference occurs with much higher flow rates than would occur if only -5cmH₂O vacuum were produced at the alveolar level. Flow rates and turbulence will be produced to equal 40 to 60cmH₂O pressure. The tubules are smaller and longer due to disease. This pressure will cause in these smaller tubes marked turbulence due to higher flow rates in comparison to what the patient was using before starting on mechanical equipment. The only way to stop the large alveolar pressure changes is to sedate the patient. If less pressure is produced and the flow rate is controlled and adjusted to what the airway can handle then excess pressures will not cause too high flow rates and better delivery characteristics can be established.

In mechanical ventilation, the lowest pressure to deliver the volume is all that is wanted. In the volume-cycled machine, pressure builds up until flow starts. Pressure continues to build up as flow rate increases. This is a process of steadily and rapidly rising pressures and flow rates until volume is used up compressing air as the piston goes through its cycle. The high fixed flow rate pressure-cycled machines start with a very high flow rate which must have high pressures to cause the flow. Here, pressures rapidly rise to cut off. The pressure-cycled machines that have separate controls for flow rates and pressures work differently from the high flow rate machines. The high fixed flow rate and volume-cycled machines work much the same. Pressure builds up and flow rates are increased until

all the volume is expended or pressure is reached. In flow rate controlled machines early pressure buildup will be just sufficient to cause the preset flow. This pressure, as with any other machine, must be produced to deliver the flow rate selected. Since flow is controlled, now pressure must buildup at the delivery end. As pressure is developed at the delivery end it is balanced by an increase in pressure at the machine end, since cycling pressure has not been reached. In this way there is a gradual buildup of pressure at the delivery end, than at the machine end, until cycling pressure has been reached. During this slow buildup period pressure difference at the two ends of the tube remain the same with continuing flow at the preset rate and thus volume delivery. With this type of machine there is a rapid rise to the pressure necessary to cause the flow rate for which the machine is set, then there is a slow pressure buildup with this pressure remaining equalized and causing flow at the delivery end until cycling pressure is reached.

If high pressures are produced with low flow rates or low deliverable volumes, the volume available for flow will be delivered at the flow rate the pressure will cause. There is no way to produce high pressures and cause reasonable low flows without developing pressures at the delivery end. This pressure at the delivery end must be sufficient to keep the pressure difference at the two ends to that which will produce the desired flow.

As pressures are being built up in the tubes due to frictional resistance and turbulence, air must be compressed. Air or gas must be compressed to cause pressure. If a tube holds one liter at ambient temperature and pressure and flow is caused through it, air volume within it will increase in proportion to the pressure applied. For example, to apply 50cm of water pressure, 44ml per liter of air must be compressed to cause the pressure of 50cmH₂O. Thus, the tube must contain now the 1,000 ml it holds plus 44ml compressed to produce 50cmH₂O pressure or 1,044cc. This is of great importance where

fixed volumes are used and allowed to produce high pressures. It is not uncommon in this type of equipment to see bellows, tubes, and patient functional residual capacity add up to volumes approaching ten liters. If the machine is set to deliver 500cc per breath and turned on, what happens? Pressure begins to build up rapidly due to tubular resistance. As pressure builds up air is compressed. As 50cmH₂O is reached 44ml/liter is being compressed instead of delivered. This amounts to 440ml for the ten liters. Thus, with this equipment only 60cc would be available for delivery if this set of circumstances is happening. Where volume is restricted as in volume-cycled machines pressure rises rapidly to peak pressure because the piston keeps pushing with unlimited power. Here, pressure indicates not only tubular resistance, turbulence and flow rate, but also air compressed and not delivered. To deliver a volume the machine must produce a pressure to peak as flow rate and resistance rise, then hold this as pressure is converted to flow and slowly returns to ambient. If pressure does not return to zero before expiration occurs then the total volume has not been delivered.

The pressure buildup rate to peak in a volume-cycled machine is then an indication of airway turbulence and flow rate. The pressure remaining at beginning of expiration is an indication of volume used in compression and not delivered. Changing pressures indicate changing turbulence and compression in smaller volumes, not compensation for changing compliance.

The individual with a normal lung breathing normally makes his chest cage and diaphragm expand to contain a volume of air in a fixed period of time, depending on the trachea and bronchial tube size. Air flows into this evacuated area at a rate dependent on the pressure difference between the mouth and the alveolus. Large normal tubes require only small pressure differences. Narrowed diseased tubes produce a much greater difference and thus higher flow rates. This is to assure volume

delivery over the period of time. If volume delivery is not accomplished with these new flow rates over the period of time much greater chest cage and diaphragm volume excursions occur and the patient becomes frantic. The operator of mechanical breathing equipment must visualize what the patient is doing at the alveolar level. The flow rates and pressures mechanically added at the mouth must compliment not aggravate what is happening at the alveolar level. High flow rates and high pressures will only aggravate turbulent obstruction of narrowed airways.

The normal human airway may be able to pass excessive flow rates at high pressures. The diseased narrowed airways are usually in trouble at normal flow rates of 5-10 l/min. They will not except and cannot handle flow rates 5-10 times normal without pressure addition. Pressure further aggravates high flow rates causing turbulent obstruction. Diseased bronchial tubes should never be exposed to flow rates greater than two times normal for the patient. Likewise pressures should be kept low.

If an individual is not breathing, if he is apneic, there are no pressure changes occurring at the chest cage and alveolar level. To ventilate this patient then with mechanical equipment this alveolar pressure must be added at the mouth. In the breathing patient no pressure was required to increase the chest cage volume. In the apneic patient sufficient pressure must be produced to push the chest cage out. Ventilation is for this reason more difficult in the apneic patient. Now there must be produced at the mouth (1) the pressure necessary to cause flow, (2) the pressure that would have been produced at the alveolar level, and (3) the pressure necessary to stretch the elastic lungs and push the chest cage out. This adds up to considerable more pressure than was being used with the patient breathing on his own. Now after getting the lungs filled this high pressure is present in the alveolus. When mechanical pressure and flow are stopped at the mouth and as expira-

tion starts alveolar pressures are too high. Now the tubes are getting shorter and smaller and resistance is increasing, new problems occur. The lung elasticity is reducing the pressure needed. There is no need for the high pressures necessary to expand the lungs and push out the chest cage. These added pressures only increase the alveolar mouth pressure difference and thus flow rate. The high flow rate causes turbulent obstruction to expiration. The lungs do not empty completely. The functional residual volume is increased which makes tidal volume less effective. The problem now is getting the air back out. The only way to do this if this situation has been allowed to develop is to apply at the mouth sufficient positive pressure to reduce the alveolar-mouth pressure difference to the point flow rate is low enough to empty the lungs during expiration without turbulent obstruction. There are other more severe changes with high positive pressures.

There is a second way of handling this situation. The first methods of resuscitation (the pron-position, etc., teeter board, and rolling over a barrel) were done by deflating the lungs below functional residual capacity on expiration and allowing them to go back to functional residual capacity. These methods made smaller tidal volumes more effective with the now reduced functional residual capacity.

The lungs in health are routinely subjected to a vacuum (subambient pressures) of $-5\text{cmH}_2\text{O}$ by normal breathing. In diseased states, vacuums (subambient pressures) up to 40 to 50 cmH_2O pressure are produced during breathing. If the breathing individual produces these pressures, how can it be dangerous to produce 3 to 5 cmH_2O vacuum (subambient pressure) at the mouth? The answer—it is not. Intermittent vacuum (subambient pressures) alternated with moderate inspiratory positive pressures produce much more effective and much less dangerous ventilation than high positive pressures especially with end expiratory retard. Stiff lungs are usually the result of,

and always made worse by, high inspiratory positive pressures especially where a retard to expiration is used. Now what happens in the apneic patient is as follows: during the expiratory phase 3 to 5cm vacuum (subambient pressure) is applied at the mouth. The functional residual volume is reduced and this makes the tidal volume more effective in increasing alveolar oxygen partial pressures and reducing alveolar CO₂. At the end of expiration there is now an alveolar vacuum at the beginning of inspiration (as in normal breathing). Now when inspiration begins, (using a flow rate controllable machine) the first portion is delivered pressure free as there is a return to zero pressure in the alveolus. Now before any pressure buildup is started part of the tidal volume has already been delivered. Now less positive pressure is needed to produce an effective tidal volume and lower pressures are required. If a slower buildup of vacuum (subambient pressure) at the mouth is needed due to the use of too high a positive pressure on inspiration the use of a retard

cap to slow the rate at which the vacuum (subambient pressure) is built up but ending with a satisfactory vacuum (subambient pressure) at end expiration is needed. The individual who has developed stiff lungs as a result of overzealous application of positive pressure followed by positive pressure with expiratory retard, can be improved by switching to a flow rate controlled machine with a negative phase and expiratory retard cap. As ventilation improves following switching, inspiratory pressures are slowly reduced and expiratory retard cap is slowly removed until inspiratory pressures of 20 to 25cmH₂O and expiratory subambient pressures of 3 to 5cmH₂O are being used. As this is done stiff lungs slowly improve. High fixed flow rate machines are not usable. The high and low flow settings only effect venturi intrainment. This has no effect on the machine's delivery characteristics. The volume-cycled machine is not and cannot be flow rate controlled without controlling pressure.

Longevity Studied By Dr. Casey

Sixty-four Irish priests and professors who served on the faculty of Spring Hill College in Mobile between 1830 and 1972 are aiding in a research study on the subject of longevity. Ironically, all 64 are dead and buried in the Spring Hill faculty cemetery.

According to Dr. Albert E. Casey of Birmingham, those professors and priests were natives of an upland bog district in southern Ireland whose inhabitants have attained a world-record average life span of 77 years. Comparing this to an average life span of 68 years for other people of the British Isles and the United States, Dr. Casey attributes the nine year increase to a combination of factors including diet, environment, and genetics, but especially the type of work an individual does.

Dr. Casey, a clinical professor of pathology at the University of Alabama in Birmingham (UAB) and director of the Memorial

Institute of Pathology, has been studying longevity for more than 20 years, making periodic trips to the mountainous Sliab Luachra region of Southern Ireland since 1950 to gather information for his research.

"The Spring Hill professors were younger sons of landowners in the SL region who turned to Jesuit professions since their older brothers would normally inherit their fathers' dairy farms," Casey said. "The information on their gravestones provided me with valuable information I used in tracing their families. As a group, they also served as a basis for comparison to their relatives back in Ireland in respect to age, environment, diet, job type, and so forth."

Dr. Casey characterized the longest-living inhabitants of the SL region as farmer-dairymen who worked mainly with their hands or arms, lived in a pollution-free environment, and relied largely on milk

foods for their diet. The death rate from animal fat disease among these people, however, was 76 per cent, an increase of 50 per cent over that found in the United States.

"This incidence from coronary failure would be much higher if it were not for the heavy exercise involved in dairy farm labor," Dr. Casey said. "Inhabitants of the same region who had a similar diet but less strenuous jobs showed a tendency to die much younger than their hard-working neighbors. For example, younger brothers who left the farm to become priests and schoolmasters in surrounding Irish villages died at the normal average age of 68, while hand-and-arm workers, including woodcutters and gardeners as well as those on the farm, outlived them."

A chart drawn from information compiled by Dr. Casey shows an increase in the number of centenarians (persons of at least 100 years of age) in the Irish dairylands. An average of 11 persons per million of population manage to reach 100 in the United States; a Russian census shows up to 22 centenarians per million. Since 1600 B. C.,

Ireland has maintained a constant 44 per million.

Dr. Casey has traced the ancestry of these British Isle dairymen back to the cattle farms they worked in Mycenaean Greece more than 4,000 years ago. Recent excavations of a tomb at Maicop in the Caucasus, which is the fabled Land of the Golden Fleece, indicates that dairy farming was well established on the edge of the Black Sea about 2500 B. C., with the extensive use of milk products existing at that time. These investigations have allowed Dr. Casey to unearth connections with the recently publicized Russian centenarians who claim to be up to 150 years old. Other incidences of extreme longevity in the same general area of the world are tied together by Dr. Casey's detailed research.

UAB personnel assisting Dr. Casey and his wife, Joanne G. Casey, included: Eleanor L. Downey, Dr. J. Frank Gravlee, Mrs. Cornelia Holland, Dr. and Mrs. William H. Coleman, Dr. Worth W. Barham, Dr. Eoline McGowan, Dr. William Niedermeier, Mr. James Griggs, Dr. Leo Hall, and Dr. Howard Elliott, Jr.

Micro-Suture Breakthrough Is Ready

A new minature suture for use in micro-vascular surgery is now ready for world export.

The manufacturer, Astronics Australasia Pty. Ltd., of Melbourne, attracted worldwide attention in medical circles in 1970 when it produced the first micro-suture in which the needle was an integral part of the thread.

These micro-sutures have since been used by surgeons in eight countries including the U. S. for operations using the new technique of micro-vascular surgery—which involves the repair and reconstruction of nerves and blood vessels as small as 1 mm. in diameter.

Astronics developed the micro-sutures, along with special micro-vascular clamps designed for holding blood vessels in place dur-

ing surgery, in co-operation with the Australian surgeons who were among the pioneers of this type of surgery. The new micro-sutures are a considerable improvement on the earlier types, and their introduction is expected to create great interest among surgeons using these techniques.

The new sutures have a needle component made from a new alloy which is harder and tougher than that used in the earlier types. As well as being less brittle, the needle can be given a sharper point, and has a longer life.

Special films demonstrating microvascular techniques have been prepared in Australia, and papers covering the work of the Australian surgeons and the instruments developed by Astronics have been published in medical journals in Australia and overseas.

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Supplied: Bottles of 50 capsules.

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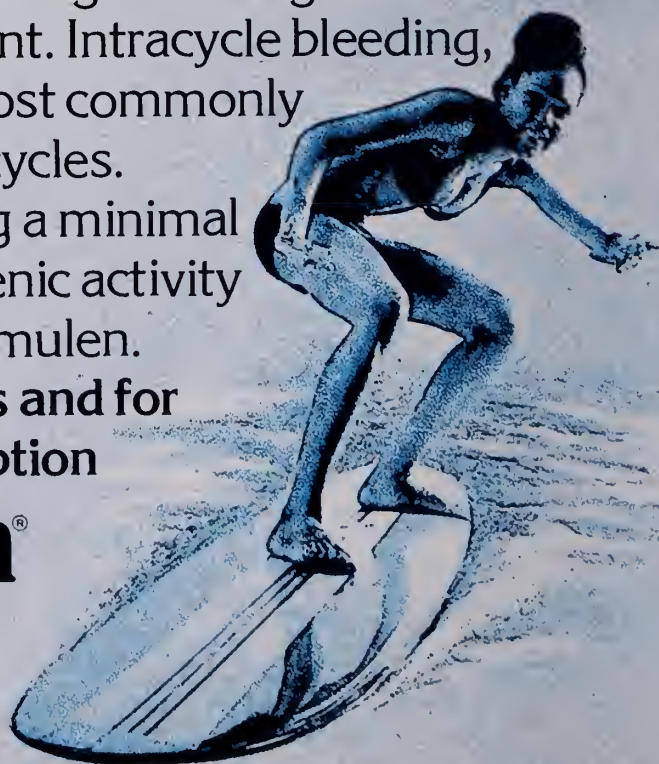
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Clinical evidence clearly suggests that no single birth control pill can suit all women. Searle offers three pill formulations, each with a different hormone ratio and activity to cover most patients' needs.

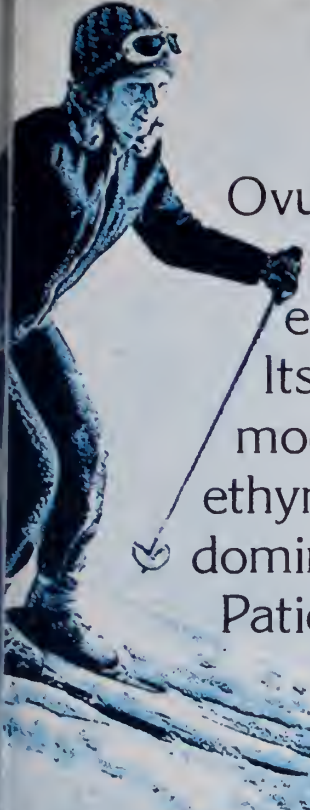
Demulen is well suited to those women for whom low-dose estrogenic activity may be preferred. Demulen has only 50 mcg. of estrogen and is moderately progestogen dominant. Intracycle bleeding, if it occurs, is most commonly seen in the first few cycles. Certain women requiring a minimal level of estrogenic activity may do well on Demulen. **for high estrogen profiles and for conservative oral contraception**

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Note: Oral contraceptives are complex medications. They should be prescribed with care and reference to the prescribing information.



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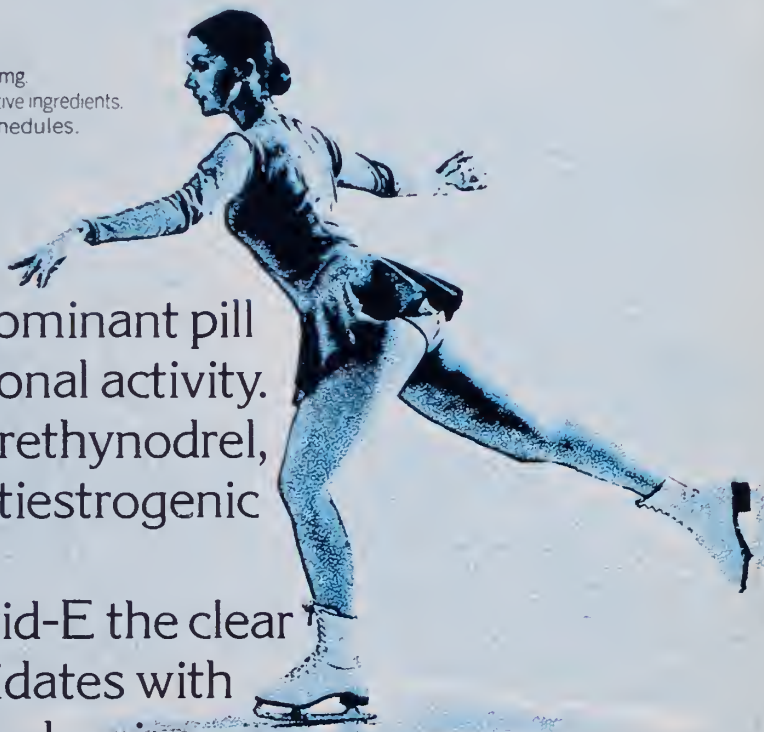
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Each white tablet contains
ethynodiol diacetate 1 mg / ethinyl estradiol 50 mcg.

Each pink tablet in Ovulen-28® and Demulen-28® is a placebo, containing no active ingredients.

Actions—Ovulen and Demulen act to prevent ovulation by inhibiting the output of gonadotropins from the pituitary gland. Ovulen and Demulen depress the output of both the follicle-stimulating hormone (FSH) and the luteinizing hormone (LH).

Special note—Oral contraceptives have been marketed in the United States since 1960. Reported pregnancy rates vary from product to product. The effectiveness of the sequential products appears to be somewhat lower than that of the combination products. Both types provide almost completely effective contraception.

An increased risk of thromboembolic disease associated with the use of hormonal contraceptives has now been shown in studies conducted in both Great Britain and the United States. Other risks, such as those of elevated blood pressure, liver disease and reduced tolerance to carbohydrates, have not been quantitated with precision.

Long-term administration of both natural and synthetic estrogens in subprimate animal species in multiples of the human dose increases the frequency of some animal carcinomas. These data cannot be transposed directly to man. The possible carcinogenicity due to the estrogens can be neither affirmed nor refuted at this time. Close clinical surveillance of all women taking oral contraceptives must be continued.

Indication—Ovulen and Demulen are indicated for oral contraception.

Contraindications—Patients with thrombophlebitis, thromboembolic disorders, cerebral apoplexy or a past history of these conditions, markedly impaired liver function, known or suspected carcinoma of the breast, known or suspected estrogen-dependent neoplasia and undiagnosed abnormal genital bleeding.

Warnings—The physician should be alert to the earliest manifestations of thrombotic disorders (thrombophlebitis, cerebrovascular disorders, pulmonary embolism and retinal thrombosis). Should any of these occur or be suspected the drug should be discontinued immediately.

Retrospective studies of morbidity and mortality conducted in Great Britain and studies of morbidity in the United States have shown a statistically significant association between thrombophlebitis, pulmonary embolism, and cerebral thrombosis and embolism and the use of oral contraceptives. There have been three principal studies in Britain¹ leading to this conclusion, and one² in this country. The estimate of the relative risk of thromboembolism in the study by Vessey and Doll³ was about sevenfold, while Sartwell and associates⁴ in the United States found a relative risk of 4.4, meaning that the users are several times as likely to undergo thromboembolic disease without evident cause as nonusers. The American study also indicated that the risk did not persist after discontinuation of administration and that it was not enhanced by long-continued administration. The American study was not designed to evaluate a difference between products. However, the study suggested that there might be an increased risk of thromboembolic disease in users of sequential products. This risk cannot be quantitated, and further studies to confirm this finding are desirable.

Discontinue medication pending examination if there is sudden partial or complete loss of vision, or if there is a sudden onset of proptosis, diplopia or migraine. If examination reveals papilledema or retinal vascular lesions medication should be withdrawn.

Since the safety of Ovulen and Demulen in pregnancy has not been demonstrated, it is recommended that for any patient who has missed two consecutive periods pregnancy should be ruled out before continuing the contraceptive regimen. If the patient has not adhered to the prescribed schedule the possibility of pregnancy should be considered at the time of the first missed period.

A small fraction of the hormonal agents in oral contraceptives has been identified in the milk of mothers receiving these drugs. The long-range effect to the nursing infant cannot be determined at this time.

Precautions—The pretreatment and periodic physical examinations should include special reference to the breasts and pelvic organs, including a Papanicolaou smear since estrogens have been known to produce tumors, some of them malignant, in five species of subprimate animals. Endocrine and possibly liver function tests may be affected by treatment with Ovulen or Demulen. Therefore, if such tests are abnormal in a patient taking Ovulen or Demulen, it is recommended that they be repeated after the drug has been withdrawn for two months. Under the influence of progestogen-estrogen preparations pre-existing uterine fibromyomas may increase in size. Because these agents may cause some degree of fluid retention, conditions which might be influenced by this factor, such as epilepsy, migraine, asthma, cardiac or renal dysfunction, require careful observation. In breakthrough bleeding, and in all cases of irregular bleeding per vaginam, nonfunctional causes should be borne in mind. In undiagnosed bleeding per vaginam adequate diagnostic measures are indicated. Patients with a history of psychic depression should be carefully observed and

the drug discontinued if the depression recurs to a serious degree. Any possible influence of prolonged Ovulen or Demulen therapy on pituitary, ovarian, adrenal, hepatic or uterine function awaits further study. A decrease in glucose tolerance has been observed in a significant percentage of patients on oral contraceptives. The mechanism of this decrease is obscure. For this reason, diabetic patients should be carefully observed while receiving Ovulen or Demulen therapy. The age of the patient constitutes no absolute limiting factor, although treatment with Ovulen or Demulen may mask the onset of the climacteric. The pathologist should be advised of Ovulen or Demulen therapy when relevant specimens are submitted. Susceptible women may experience an increase in blood pressure following administration of contraceptive steroids.

Adverse reactions observed in patients receiving oral contraceptives—A statistically significant association has been demonstrated between use of oral contraceptives and the following serious adverse reactions: thrombophlebitis, pulmonary embolism and cerebral thrombosis.

Although available evidence is suggestive of an association, such a relationship has been neither confirmed nor refuted for the following serious adverse reactions: neuro-ocular lesions, e.g., retinal thrombosis and optic neuritis.

The following adverse reactions are known to occur in patients receiving oral contraceptives: nausea, vomiting, gastrointestinal symptoms (such as abdominal cramps and bloating), breakthrough bleeding, spotting, change in menstrual flow, amenorrhea during and after treatment, edema, chloasma or melasma, breast changes (tenderness, enlargement and secretion), change in weight (increase or decrease), changes in cervical erosion and cervical secretions, suppression of lactation when given immediately post partum, cholestatic jaundice, migraine, rash (allergic), rise in blood pressure in susceptible individuals and mental depression.

Although the following adverse reactions have been reported in users of oral contraceptives, an association has been neither confirmed nor refuted: anovulation post treatment, premenstrual-like syndrome, changes in libido, changes in appetite, cystitis-like syndrome, headache, nervousness, dizziness, fatigue, backache, hirsutism, loss of scalp hair, erythema multiforme, erythema nodosum, hemorrhagic eruption and itching.

The following laboratory results may be altered by the use of oral contraceptives: hepatic function: increased sulfobromophthalein retention and other tests; coagulation tests: increase in prothrombin, Factors VII, VIII, IX and X; thyroid function: increase in PBI and butanol extractable protein bound iodine and decrease in T₃ uptake values, metyrapone test and pregnanediol determination.

References: 1. Royal College of General Practitioners: Oral Contraception and Thrombo-Embolic Disease, J. Coll. Gen. Pract. 13:267-279 (May 1963). 2. Inman, W. H. W., and Vessey, M. P.: Investigation of Deaths from Pulmonary, Coronary, and Cerebral Thrombosis and Embolism in Women of Child-Bearing Age, Brit. Med. J. 2:193-199 (April 27) 1968. 3. Vessey, M. P. and Doll R.: Investigation of Relation Between Use of Oral Contraceptives and Thromboembolic Disease. A Further Report, Brit. Med. J. 2:651-657 (June 14) 1969. 4. Sartwell, P. E., Masi, A. T., Arthes, F. G., Greene, G. R., and Smith, H. E.: Thromboembolism and Oral Contraceptives: An Epidemiologic Case-Control Study, Amer. J. Epidemiol. 90:365-380 (Nov) 1969.

SEARLE

Products of SEARLE & CO.
San Juan, Puerto Rico 00936

Enovid-E®

norethynodrel 2.5 mg / mestranol 0.1 mg

Actions—Enovid-E acts to prevent ovulation by inhibiting the output of gonadotropins from the pituitary gland. Enovid-E depresses the output of both the follicle-stimulating hormone (FSH) and the luteinizing hormone (LH).

Indication—Enovid-E is indicated for oral contraception.

The Special Note, Contraindications, Warnings, Precautions and Adverse Reactions listed above for Ovulen and Demulen are applicable to Enovid-E and should be observed when prescribing Enovid-E.

Enovid-E®

brand of norethynodrel with mestranol

SEARLE

Product of Searle Laboratories
Division of G.D. SEARLE & CO.
Box 5110, Chicago, Illinois 60680
Where "The Pill" Began



around the state

Vital Statistics

NEW MEMBERS

Lauderdale County

Patton, Peter William Scott, b 32, mc U. Cambridge, Cambridge, England 59, recip. North Dakota 72, 341 Roxie Dr., Florence, Alabama 35630.

Mobile County

Snow, Louie Lamar, b 36, mc Ala. 65, sb 66, 125 Louiselle, Mobile, Alabama 36607. S.

Montgomery County

Robbins, Charles Neil, b 34, mc U. Tenn. College of Med. 68, recip. Tenn. 72, 1655 Gilmer Ave., Montgomery, Alabama 36104. Oph.

Walker County

Smith, Prentiss Lee, b 45, mc U. Miss. School of Med. 71, recip. Miss. 72, Jackson Clinic, P. O. Box 1389, Jasper, Alabama 35501. GP.

MEMBERS DECEASED

Etowah County

Rogers, Joseph Handley, Birmingham, Alabama, Deceased 9/8/72.

Montgomery County

Jabour, Florian Emile, Montgomery, Alabama, Deceased 11/27/72.

Stough, Austin Robert, Montgomery, Alabama, Deceased 9/26/72.

Talladega County

Terry, Lucius Lamar, Talladega, Alabama, Deceased 9/29/72.

CHANGES OF ADDRESS

Baldwin County

Britton, James W., present Foley to Rt. 3, Box 140-A, Foley, Alabama 36535.

Norton, Thomas B., present Gulf Shores to P. O. Box 475, Gulf Shores, Alabama 36542.

Barbour County

Berrey, Ruth R., present Clayton to P. O. Box 501, Clayton, Alabama 36016.

Etowah County

Bobo, John S., present Gadsden to 214 Argyle Circle, Gadsden, Alabama 35901.

Hale County

McAdory, Wallace C., Jr., present Greensboro to P. O. Box 281, Greensboro, Alabama 36744.

Ramey, Daniel R., Jr., present Greensboro to P. O. Box 399, Greensboro, Alabama 36744.

Singleton, Chester E., present Greensboro to P. O. Box 359, Greensboro, Alabama 35744.

Jefferson County

Linton, Patrick H., present Birmingham to Dept. of Psychiatry, Univ. Station, Birmingham, Alabama 35294.

Lauderdale County

Herring, John S., present Florence to Rt. 7, Box 387, Florence, Alabama 35630.

AROUND THE STATE

Marshall County

Christopher, Neil E., present Guntersville to Med. Arts Center, Guntersville, Alabama 35976.

Mobile County

Bryant, Edward L., present Mobile to P. O. Box 4205, Mobile, Alabama 36604.

Dulaney, Frank M., Jr., present Mobile to P. O. Box 4205, Mobile, Alabama 36604.

Eubanks, James R., present Mobile to P. O. Box 4205, Mobile, Alabama 36604.

Lane, Martin L., present Mobile to P. O. Box 4205, Mobile, Alabama 36604.

Roberts, Mack J., present Mobile to 602 Bel Air Blvd., Suite 15, Mobile, Alabama 36606.

Montgomery County

McRae, James D., present Montgomery to 2119 E. South Blvd., Montgomery, Alabama 36111.

Selikoff, Eli, present Montgomery to 2119 E. South Blvd., Montgomery, Alabama 36111.

Pickens County

Douglas, George C., present Reform, Alabama to Carrollton, Alabama 35447.

Tuscaloosa County

Fernandez, Gabriel, present Tuscaloosa to 921 3rd Ave., E., Tuscaloosa, Alabama 35401.

Monroe, William D., present Tuscaloosa to 62 Sherwood Dr., Tuscaloosa, Alabama 35401.

Payne, Louis T., present Tuscaloosa to 400 B. East 10th St., Tuscaloosa, Alabama 35401.

NEW TELEPHONE NUMBERS

LeQuire, D. L., Jackson	574-3500
Linton, P. H., Jefferson	934-5171
McGee, L. S., Jr., Mobile	432-2701
Mertins, P. S., Jr., Montgomery	262-5273

(Continued on Page 566)

PRESCRIBING INFORMATION

Antiminth (pyrantel pamoate) Oral Suspension

Actions. Antiminth (pyrantel pamoate) has demonstrated anthelmintic activity against *Enterobius vermicularis* (pinworm) and *Ascaris lumbricoides* (roundworm). The anthelmintic action is probably due to the neuromuscular blocking property of the drug.

Antiminth is partially absorbed after an oral dose. Plasma levels of unchanged drug are low. Peak levels (0.05-0.13 µg/ml.) are reached in 1-3 hours. Quantities greater than 50% of administered drug are excreted in feces as the unchanged form, whereas only 7% or less of the dose is found in urine as the unchanged form of the drug and its metabolites.

Indications. For the treatment of ascariasis (roundworm infection) and enterobiasis (pinworm infection).

Warnings. *Usage in Pregnancy:* Reproduction studies have been performed in animals and there was no evidence of propensity for harm to the fetus. The relevance to the human is not known.

There is no experience in pregnant women who have received this drug.

Precautions. Minor transient elevations of SGOT have occurred in a small percentage of patients. Therefore, this drug should be used with caution in patients with pre-existing liver dysfunction.

Adverse Reactions. The most frequently encountered adverse reactions are related to the gastrointestinal system.

Gastrointestinal and hepatic reactions: anorexia, nausea, vomiting, gastralgia, abdominal cramps, diarrhea and tenesmus, transient elevation of SGOT.

CNS reactions: headache, dizziness, drowsiness, and insomnia. Skin reactions: rashes.

Dosage and Administration. *Children and Adults:* Antiminth Oral Suspension (50 mg. of pyrantel base/ml.) should be administered in a single dose of 11 mg. of pyrantel base per kg. of body weight (or 5 mg./lb.); maximum total dose 1 gram. This corresponds to a simplified dosage regimen of 1 cc. of Antiminth per 10 lb. of body weight. (One teaspoonful = 5 cc.)

Antiminth (pyrantel pamoate) Oral Suspension may be administered without regard to ingestion of food or time of day; and purging is not necessary prior to, during, or after therapy. It may be taken with milk or fruit juices. Because of limited data on repeated doses, no recommendations can be made.

How Supplied. Antiminth is available as a pleasant tasting caramel-flavored suspension which contains the equivalent of 50 mg. pyrantel base per ml., supplied in 60 cc. bottles.

ROERIG 

A division of Pfizer Pharmaceuticals
New York, New York 10017

Clean Sweep



with a single dose of Antiminth

(pyrantel pamoate) ORAL SUSPENSION

Highly effective against
worm and roundworm

Non-staining to teeth
oral mucosa on ingestion, to
clothes, clothing, linen

Simple dosage with a
single-dose regimen: 1 cc. per
lb. body weight (1 tsp./50 lb.;
maximum dose, 4 tsp.)

Well-tolerated, based on
clinical studies*

Pleasant-tasting, easy-to-
take, caramel-flavored oral
suspension

Economical, because one
prescription can treat the entire
family

ROERIG *Pfizer*

A division of Pfizer Pharmaceuticals
New York, New York 10017

ANTIMINTH[®]

(pyrantel pamoate)

equivalent to 50 mg. pyrantel/ml.

ORAL SUSPENSION

While Antiminth is highly effective against pinworms and roundworms, the illustration is not meant to imply 100% efficacy.
Data on file at Roerig. Please see prescribing information on facing page.

(Continued from Page 564)

Neville, G. M., Jr., Choctaw	459-2468	Smith, P. L., Walker	387-2161
Robbins, C. N., Montgomery	262-4512	Snow, L. L., Mobile	433-2609
Ryan, R. T., Jr., Jefferson	822-4200	Wiles, G. W., Mobile	478-5245

New Physicians Licensed to Practice in Alabama



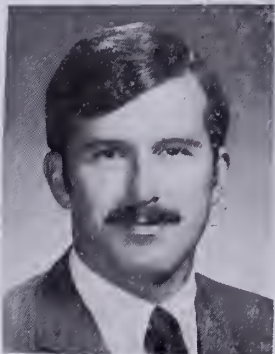
R. L. Applebaum,
M. D.
Birmingham



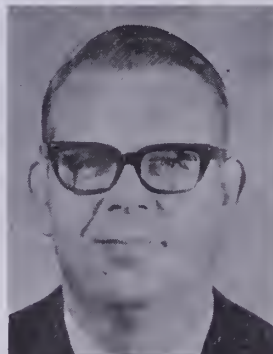
F. R. Brosch,
M. D.
Birmingham



J. T. Danzi,
M. D.
Montgomery



E. A. DeBardelaben, Jr.,
M. D.
Birmingham



W. L. Garrett, Jr.,
M. D.
Opelika



W. K. Haney,
M. D.
Decatur



R. R. Harrell,
M. D.
Birmingham



C. H. Herndon, Jr.,
M. D.
Selma



J. B. Howell,
M. D.
Mobile

AROUND THE STATE



T. J. Jaski,
M. D.
Montgomery



Santosh Kensal,
M. D.
Birmingham



P. W. Kendrick,
M. D.
Birmingham



C. W. Moorefield,
M. D.
Birmingham



R. B. Morawetz
M. D.
Birmingham



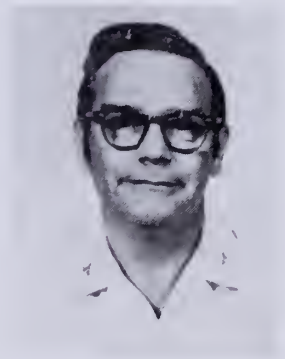
M. K. Oh,
M. D.
Birmingham



S. R. Perry,
M. D.
Birmingham



R. C. Phelps,
M. D.
Birmingham



R. S. Preston,
M. D.
Montgomery



P. S. Selikoff,
M. D.
Columbus AFB, Miss.



D. L. Weston,
M. D.
Tuscaloosa

What it means to live and work in Tipton County, Tennessee

**Persons who are white and
over 40 have one chance in four
of having solar keratoses...
which may be premalignant**

An epidemiologic study* conducted in Tipton County, Tennessee, revealed that 28.5% of white persons over 40 had solar keratoses; most had multiple lesions. Cluster sampling projected an estimated prevalence of 32.5% for white males and 19.5% for white females.

Though this is an unusually high percentage of affected persons, these lesions can occur in any white population, wherever people work or play out of doors.

**Prevalence of solar keratoses in white persons
over 40 in Tipton County, Tennessee**

Female	159	44
Male	117	66

☐ Persons without solar keratoses ☒ Persons with solar keratoses

*Data on file, Hoffmann-La Roche Inc., Nutley, New Jersey.



Solar, actinic, senile keratoses

led by many names, the typical lesion is flat or slightly elevated, brownish or reddish in color, papular, dry, adherent, rough, sharply defined; usually multiple lesions, chiefly on exposed portions of the skin.

Sequence/selectivity of response

Erythema in areas of lesions may begin after several days of therapy; height of reaction usually in affected areas)* usually occurs within 2 to 3 weeks, declining after discontinuation of therapy. Since this response is so predictable, lesions that do not respond should be biopsied to rule out the presence of a frank neoplasm.

Cosmetic results

Cosmetic results are highly favorable. Incidence of scarring is low—important with multiple facial lesions. Efudex should be applied with care near the eyes, nose and mouth.

5% cream—a Roche exclusive

Only Roche formulates the 5% cream... high in patient acceptability... high in clinical efficacy, especially for lesions of hands and feet... economical.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Multiple actinic or solar keratoses.

Contraindications: Patients with known hypersensitivity to any of its components.

Warnings: If occlusive dressing used, may increase inflammatory reactions in adjacent normal skin. Avoid prolonged exposure to ultraviolet rays. Safe use in pregnancy not established.

Precautions: If applied with fingers, wash hands immediately. Apply with care near eyes, nose and mouth. Lesions failing to respond or recurring should be biopsied.

Adverse Reactions: Local—pain, pruritus, hyperpigmentation and burning at application site most frequent; also dermatitis, scarring, soreness and tenderness. Also reported—insomnia, stomatitis, suppuration, scaling, swelling, irritability, medicinal taste, photosensitivity, lacrimation, leukocytosis, thrombocytopenia, toxic granulation and eosinophilia.

Dosage and Administration: Apply sufficient quantity to cover lesion twice daily with nonmetal applicator or suitable glove. Usual duration of therapy is 2 to 4 weeks.

How Supplied: Solution, 10-ml drop dispensers—containing 2% or 5% fluorouracil on a weight/weight basis, compounded with propylene glycol, tris(hydroxymethyl)amino-methane, hydroxypropyl cellulose, parabens (methyl and propyl) and disodium edetate.

Cream, 25-Gm tubes—containing 5% fluorouracil in a vanishing cream base consisting of white petrolatum, stearyl alcohol, propylene glycol, polysorbate 60 and parabens (methyl and propyl).

an alternative to conventional therapy **Efudex[®]** (fluorouracil) cream/solution



Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110



Gains In Cancer Research And Treatment

Officials of the National Cancer Institute estimate that half the cancers in the United States could be cured if found and given optimum treatment at an early stage. With this goal in mind, a National Cancer Program is being developed to apply research results to diagnosis and treatment. Although the program is just getting underway, some of the steps that have been taken include:

A joint plan by the National Cancer Institute and the American Cancer Society for establishing up to 20 centers for the early detection of breast cancer, the primary cause of cancer deaths among women.

Task forces to coordinate, study and improve the treatment of cancers of the large intestine, prostate and pancreas (the second, third and fourth most frequent causes of cancer deaths.) Research on cancer of the large intestine will be conducted at the M. D. Anderson Hospital and Tumor Institute in Houston, Texas; six contracts have been awarded to date for research into prostate cancer, and eight for the pancreatic cancer program.

An agreement was reached with the U.S.S.R. to exchange cancer information and drugs and research results concerning heart disease and environmental studies.

In the search for effective treatment methods, the NCI continued to support research into the possible effectiveness of BCG, a bacteria that has been shown to stimulate resistance against the development of tumors in experimental animals and in combination with other treatment has produced some encouraging results in human trials.

Research into the mechanism of tumor growth resulted in the discovery of a chemical that attracts capillaries—and thus a continuing blood supply and means of carrying off wastes—to most solid tumors. Dr. Judah Folkman of Harvard labeled the chemical the tumor angiogenesis factor, or TAF. Dr. Folkman established that the

absence of this chemical prevented new capillaries from being attracted to tumors in the eyes of rabbits, and that the presence of TAF caused rapid tumor growth. Research is continuing for an “anti-angiogenesis factor” that would block the effect of TAF.

Atomic particle therapy, using radiation with protons and pi-mesons to arrest tumor development, is being investigated at several centers in the United States. Previous research has suggested that heavy particle therapy may be effective in treating advanced cancers of the mouth, throat, cervix, bladder and pancreas. The NCI has allotted approximately \$1.5 million per year for investigation of the physical and biological effects of fast neutrons on animal cells and laboratory animals.

In the continuing search for a viral cause for cancer, present research centers on C- and B-type viruses, which have been found in human tumor tissues or secretions and are indistinguishable from known cancer-causing agents in animals.

The type two herpes simplex virus has been strongly implicated in human cervical cancer in a study by virologists from the University of Chicago and Emory University of Atlanta. Dr. Bernard Roizman and his co-workers have succeeded in isolating a virus fragment in the chromosomes of cells taken from a cervical cancer tumor. This is the first demonstration of herpes simplex virus DNA and its RNA transcripts in a human cancer. A newly-developed technique for measuring viral DNA and RNA fragments was used to identify the viral components in the tumor.

The enzyme reverse transcriptase has been found in human leukemia cells by investigators at the NCI. The enzyme has the ability to use the genes of viruses to make human genetic material and is also produced by a virus that is known to cause leukemia in woolly monkeys and baboons.

(Continued on Page 590)

Integument!

Our skin—the human integument—covers us, defines us, protects us. But skin is subject to cuts, burns, abrasions. And infections. Neosporin Ointment fights infection by providing broad antibacterial action against susceptible skin invaders. It contains antibiotics that are rarely used systemically, reducing the risk of sensitization.

INDICATIONS: *Therapeutically*, used as an adjunct to appropriate systemic therapy for topical infections, primary or secondary, due to susceptible organisms, as in:

- infected burns, skin grafts, surgical incisions, otitis externa
- primary pyodermas (impetigo, ecthyma, sycosis vulgaris, paronychia)
- secondarily infected dermatoses (eczema, herpes, and seborrheic dermatitis)
- traumatic lesions, inflamed or suppurating as a result of bacterial infection.

Prophylactically, the ointment may be used to prevent bacterial contamination in burns, skin grafts, incisions, and other clean lesions. For abrasions, minor cuts and wounds accidentally incurred, its use may prevent the development of infection and permit wound healing.

CONTRAINDICATIONS: Not for use in the external ear canal if the eardrum is perforated. This product is contraindicated in those individuals who have shown hypersensitivity to any of the components.

PRECAUTION: As with other antibiotic preparations, prolonged use may result in overgrowth of nonsusceptible organisms and/or fungi. Appropriate measures should be taken if this occurs. Articles in the current medical literature indicate an increase in the prevalence of persons allergic to neomycin. The possibility of such a reaction should be borne in mind.

Complete literature available on request from Professional Services Dept. PML.

NEOSPORIN[®] Ointment

(POLYMYXIN B-BACITRACIN-NEOMYCIN)

Each gram contains: Aerosporin[®] brand Polymyxin B Sulfate 5,000 units; zinc bacitracin 400 units; neomycin sulfate 5 mg. (equivalent to 3.5 mg. neomycin base); special white petrolatum q.s. In tubes of 1 oz. and ½ oz. and ⅓ oz. (approx.) foil packets.



Wellcome

Burroughs Wellcome Co.
Research Triangle Park
North Carolina 27709



POWELL & HYDE Sts.

513

ONLY OUR FOOD SURPASSES OUR VIEW

FISHMEN'S WHARF

SAN FRANCISCO MUNICIPAL RAILWAY

If he's making the
rounds of San Francisco...

Antivert[®] (meclizine HCl) for vertigo*

Antivert[®] (meclizine HCl) has been found useful in the management of vertigo associated with diseases affecting the vestibular system. It is available as Antivert (12.5 mg. meclizine HCl) and Antivert/25 (25 mg. meclizine HCl) scored tablets for convenience and flexibility of dosage. Antivert/25 (25 mg. meclizine HCl) Chewable Tablets are available for the management of nausea, vomiting, and dizziness associated with motion sickness.

INDICATIONS. Based on a review of this drug by the National Academy of Sciences-National Research Council and/or other information, FDA has classified the indications as follows:

Effective: Management of nausea and vomiting and dizziness associated with motion sickness.

Possibly Effective: Management of vertigo associated with diseases affecting the vestibular system.

Final classification of the less than effective indications requires further investigation.

CONTRAINDICATIONS. Administration of Antivert during pregnancy or to women who may become pregnant is contraindicated in view of the teratogenic effect of the drug in rats.

The administration of meclizine to pregnant rats during the 12th-15th day of gestation has produced cleft palate in the offspring. Limited studies using doses of over 100 mg./kg./day in rabbits and 10 mg./kg./day in pigs and monkeys did not show cleft palate. Congeners of meclizine have caused cleft palate in species other than the rat.

Meclizine HCl is contraindicated in individuals who have shown a previous hypersensitivity to it.

WARNINGS. Since drowsiness may, on occasion, occur with use of this drug, patients should be warned of this possibility and cautioned against driving a car or operating dangerous machinery.

Usage in Children: Clinical studies establishing safety and effectiveness in children have not been done; therefore, usage is not recommended in the pediatric age group.

Usage in Pregnancy: See "Contraindications."

ADVERSE REACTIONS. Drowsiness, dry mouth and, on rare occasions, blurred vision have been reported.

ROERIG *Pfizer*
A division of Pfizer Pharmaceuticals
New York, New York 10017

Parasitic Infection Linked To Wild Cats, Cockroaches

According to the National Society for Medical Research, scientists at the National Institute of Allergy and Infectious Diseases and NIAID supported researchers have found that wild cats and cockroaches may be carriers of toxoplasmosis—usually a mild disease, but it can be serious in pregnant women.

Toxoplasmosis, a widespread parasitic infection found throughout the world, may cause congenital defects in an unborn child. The mother will experience only mild effects or no symptoms of the infection. Researchers say that more than one-third of all adult Americans are infected by the toxo organism at some time during their lives.

It was in 1970 that NIAID scientists indentified the domestic cat as a possible reservoir of the disease which is caused by the parasite *Toxoplasma gondii*.

Dr. Gordon Wallace of the NIAID's Laboratory of Parasitic Diseases in Hawaii conducted field studies which verified the laboratory information concerning the relationship between domestic cats and the parasite. He found that two species of filth flies may aid in the transmission of the disease from cat feces to the food chain ending with man.

Sac-like capsules called oocysts are the infectious form of the parasite. Last year Dr. Wallace demonstrated that both the common house fly and the Oriental blow fly will, when given access to cat feces contaminated with the parasite, transfer them to skim milk. The milk was then given to mice which subsequently developed the infection.

Now, Dr. Wallace has discovered that two common species of cockroaches are capable of harboring and shedding infectious oocysts for several days under laboratory conditions.

It is possible that in nature cockroaches might eat infectious cat feces, and then directly contaminate human food. The cock-

Heart Disease

Heart attacks in relatively young people increased, with a 14 per cent rise in deaths from coronary deficiency in men between 25 and 44 and a corresponding increase in fatal heart attacks in women under 45. Attention is being directed toward elimination of known contributing factors such as hypertension with a screening and treatment program established by the National Heart and Lung Institute. An upgraded research, prevention and education program allocated \$1.38 billion over a three-year period for development of 15 new centers for basic and clinical research into diseases of the heart, blood vessels and blood.

Evidence that saphenous vein bypass grafting of coronary arteries prolongs patients' lives was offered at the annual meeting of the American Heart Association in Dallas by researchers from the Cleveland Clinic. In a comparison of two groups of patients with obstruction of one, two or three coronary arteries, they found that the group having bypass surgery had a 15 per cent longer life expectancy than the control group that was treated medically before the bypass procedure became available.

roaches, as well as the filth flies, might also play important roles in the life cycle of toxoplasma by serving as a source of the infection for birds and small, wild rodents. These animals then may serve as a source of infection for cats or any other predatory species.

University of Kansas scientists receiving some NIAID support have also shown that domestic cats can harbor the disease. Other studies carried out in collaboration with investigators in Central America indicate that several members of the cat family can spread toxoplasma parasites through oocysts in their feces as well. Jaguarundis, ocelots, and possibly other wild felines could serve as the primary host for the parasite in the jungle, where house cats are rare or absent.

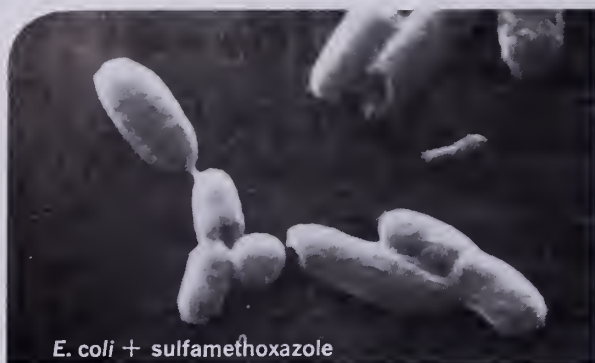
Encounter under the Scanning Electron Microscope



SEM reveals changes in *E. coli* exposed to antibacterial agents

The Scanning Electron Microscope (SEM) is the only instrument which gives 3-dimensional views on a microscopic level. This permits the surface morphology of microorganisms to be observed in

detailed perspective. Changes in surface morphology of *E. coli* exposed to various antimicrobial agents are seen on the following page. An SEM photomicrograph of normal control *E. coli* appears above.



E. coli + sulfamethoxazole



E. coli + tetracycline



E. coli + cephalothin



E. coli + ampicillin

Different modes of antibacterial action — Similar changes in morphology

As part of a series of experiments,¹⁻³ strains of *E. coli* proven susceptible to each antibacterial agent were exposed to 1 MIC of the respective antibacterials for a three-hour period. Included were cell-wall-active drugs, ampicillin and cephalothin; a drug interfering with intracellular protein synthesis, tetracycline; and a chemical agent which acts by interference with para-aminobenzoic acid, sulfamethoxazole.

As seen above, elongation of the bacilli, mid-cell defects and spheroplast-like forms may be appreciated with the SEM technique. These changes in bacterial morphology were similar... regardless of the antibacterial agent used and irrespective of

its mechanism of action.

"At present, the significance of these observations in clinical infection must be considered with caution, but it is hoped that these data will stimulate a reevaluation of present concepts of the nature and role of morphological variants of bacteria exposed to a variety of antibacterial factors."²

It should be noted that no clinical conclusions can be drawn from this study, as it is not always possible to extrapolate *in vitro* data to humans.

References: 1. Klainer, A. S.; Fass, R. J., and Perkins, R. L.: Scientific Exhibit presented at the 25th American Medical Association Clinical Convention, New Orleans, La., Nov. 28-Dec. 1, 1971. 2. Klainer, A. S., and Perkins, R. L.: *Antimicrob. Agents Chemother.*, 1:164, 1972. 3. Klainer, A. S.: Data on file, Hoffmann-La Roche Inc., Nutley, N.J.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Acute, recurrent or chronic nonobstructed urinary tract infections (primarily pyelonephritis, pyelitis and cystitis) due to susceptible organisms. **Note:** Carefully coordinate *in vitro* sulfonamide sensitivity tests with bacteriologic and clinical response; add aminobenzoic acid to follow-up culture media. The increasing frequency of resistant organisms limits the usefulness of antibacterials including sulfonamides, especially in chronic or recurrent urinary tract infections. Measure sulfonamide blood levels as variations may occur; 20 mg/100 ml should be maximum total level.

Contraindications: Sulfonamide hypersensitivity; pregnancy at term and during nursing period; infants less than two months of age.

Warnings: Safety during pregnancy has not been estab-

lished. Sulfonamides should not be used for group A hemolytic streptococcal infections and will not eradicate prevent sequelae (rheumatic fever, glomerulonephritis) of infections. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been reported and early clinical signs (sore throat, fever, pallor, purpura or jaundice) may indicate serious blood disorders. Frequent and urinalysis with microscopic examination are recommended during sulfonamide therapy. Insufficient data on children under six with chronic renal disease.

Precautions: Use cautiously in patients with impaired or hepatic function, severe allergy, bronchial asthma; in glucose-6-phosphate dehydrogenase-deficient individuals in whom related hemolysis may occur. Maintain adequate fluid intake to prevent crystalluria and stone formation.

Adverse Reactions: Blood dyscrasias (agranulocytosis,

Encounter in Clinical Practice

Control of primary bacterial offenders

Antibacterial Gantanol® (sulfamethoxazole) controls susceptible strains of *E. coli* and other gram-negative and gram-positive organisms

often implicated in acute nonobstructed pyelonephritis and cystitis.

Prompt antibacterial blood and urine levels

In from 2 to 3 hours after the initial 2-Gm adult dose, antibacterial levels are present in

both the blood and urine.

B.I.D./T.I.D. dosage for around-the-clock coverage

Subsequent 1-Gm doses provide up to 12 hours of antibacterial coverage. More severe u.t.i. may require a q. 8 h. dosage regimen. Either schedule provides coverage during the waking

and sleeping hours—especially important during hours of sleep when normal urinary retention tends to favor bacterial proliferation.

Also effective in nonobstructed chronic and recurrent u.t.i.

It is not uncommon for the elderly and the debilitated to develop chronic and/or recurrent nonobstructed urinary tract infections such as pyelonephritis and cystitis. Such cases often re-

spond satisfactorily to Gantanol. The increasing frequency of resistant organisms is a limitation of usefulness of antibacterial agents including sulfonamides, especially in chronic or recurrent u.t.i.

Your Option: Tablets or Suspension

Either dosage form—the Tablets or the pleasant-tasting, cherry-flavored Suspension—can provide the dependable antibacterial activity necessary to control susceptible nonobstructed cystitis and pyelonephritis. Symptomatic improvement may usually be expected in 24 to 48 hours. The usual precautions with sulfonamide

therapy should be observed, including adequate fluid intake. Gantanol (sulfamethoxazole) is generally well tolerated with relative freedom from complications; the most common side effects are nausea, vomiting and diarrhea. Frequent c.b.c.'s and urinalyses with microscopic examination are recommended.

In nonobstructed cystitis and pyelonephritis due to susceptible organisms

Gantanol[®] (sulfamethoxazole) Basic Therapy

c anemia, thrombocytopenia, leukopenia, hemolytic anemia, hypoprothrombinemia and methemoglobinemia); *c reactions* (erythema multiforme, skin eruptions, epidermolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival scleral injection, photosensitization, arthralgia and myocarditis); *gastrointestinal reactions* (nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and colitis); *CNS reactions* (headache, peripheral neuritis, depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia); *miscellaneous reactions* (drug fever, chills, epiphora with oliguria and anuria, periarteritis nodosa and Raynaud phenomenon). Due to certain chemical similarities with thiazides, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of hypoglycemia, diuresis and hypoglycemia as well as thy-

roid malignancies in rats following long-term administration. Cross-sensitivity with these agents may exist.

Dosage: Systemic sulfonamides are contraindicated in infants under 2 months of age (except adjunctively with pyrimethamine in congenital toxoplasmosis).

Usual adult dosage: 2 Gm (4 tabs or teasp.) initially, then 1 Gm *b.i.d.* or *t.i.d.* depending on severity of infection.

Usual child's dosage: 0.5 Gm (1 tab or teasp.)/20 lbs of body weight initially, then 0.25 Gm/20 lbs b.i.d. Maximum dose should not exceed 75 mg/kg/24 hrs.

Supplied: Tablets, 0.5 Gm sulfamethoxazole; Suspension, 0.5 Gm sulfamethoxazole/teaspoonful.



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Life Span Gains 22 Years In Twentieth Century

A child born today in the United States can expect to live about 22 years longer than his grandparents, a report published in the current issue of *Update*, a publication of the American Medical Association, says.

That's a gain of 44.5 per cent—or nearly half a life-time of life span added since 1900.

The figures are based on life expectancy data for 1971, recently released by the U. S. Public Health Service. These were compared to similar data for 1900.

"A child born in 1971 can expect to blow out the candles on his (or her) 71st birthday cake," the report says.

"Why are people living longer today? One reason is that the average living standard has greatly improved in the past seven decades. Another reason is that more people have learned the value of taking proper care of themselves.

"Also, advances by medical research and medical practice merit a large share of the credit. Since 1900, the U. S. death rate has dropped from 1,719 to 929 per 100,000 persons. That's a drop of 46 per cent.

"At the turn of the century, tuberculosis, gastritis, chronic nephritis and diphtheria were among the top ten leading causes of death. Together, they claimed 458 lives each year for every 100,000 people. Now they are no longer listed as leading killers.

"In their stead, diabetes mellitus, cirrhosis of the liver, arteriosclerosis and bronchitis and related diseases currently appear on the list. But those four killers account for a significantly lower death rate of 63.7 per 100,000.

"Six of the top ten leading causes of death in 1900 are still on the list. Four of them—influenza-pneumonia, cerebrovascular diseases, accidents and certain diseases of early infancy—now show a 54.7 per cent lower

death rate of 200.8 compared to 443.7 in 1900.

"Only the two remaining killers—heart disease and cancer—account for higher death rates now than at the turn of the century. Heart disease, currently the number one killer, now claims 358.4 lives each year for every 100,000 Americans while the death rate for second-ranking cancer is 160.9 per 100,000. The comparable figures for 1900 were 137.4 and 64 respectively."

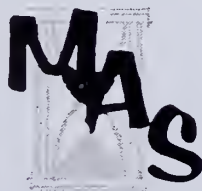
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Overpopulated Mouse Colony Doomed

Marked by the death of its last male inhabitant, a Lilliputian universe has come to an end.

Four and one-half years ago, Dr. John B. Calhoun and his associates in the National Institute of Mental Health, Health Services and Mental Health Administration, designed an ideal mouse universe in an enclosure 10 feet wide by 10 feet long with food, water, heat, and nesting space for 4,000 mice. Four males and four females placed in the enclosure flourished, raised families, and began a disease-free colony of normal, happy animals.

At the two-year mark it became apparent to the research team that something was drastically wrong in the mouse universe. Numbers were increasing so rapidly that there were no social roles for the young to fill.

Young adult males ceased the struggle for a territory of their own, and were forced to a "life on the streets" on the floor of the universe. Some young mice refused to leave the shelter of their individual nests when they matured. Untouched by the scars of competitive existence, these physically perfect specimens became known to the research team as "the beautiful ones."

Complicated tests were run on the body chemistry of individual animals to verify suspicions of tension in one group or lack of it in another. After this careful study of the breakdown in family life and social order among his mice, Dr. Calhoun predicted that the community was incapable of surviving.

When the population reached 2,200, even though the elements for physical survival remained more than ample, rearing of young and breeding ceased.

Dr. Calhoun reported on his colony in professional journals from time to time, and the mouse population study came to the attention of science writers for the news

media. It was inevitable that the ill effects resulting from the mouse population explosion be compared to those observed in our burgeoning cities.

Dr. Calhoun was invited to serve on high-level committees concerned with the survival of human civilization and has been asked to lecture before concerned audiences both in this country and abroad.

As time passed, the remaining animals in the mouse universe became too old to bear young. Today there are just 15 females left—all comparable in age to 100-year old human beings. Now that the last tottering male mouse is dead, the doom of the colony is permanently sealed.

The Manipulated Man

From the elevation of superior womanhood, a woman physician who is also versed in psychology and sociology, looks down pityingly on the the lesser sex and writes a book on it. She titles her book "The Manipulated Man."

Pavlov, it will be remembered, was the Russian physiologist at the Military Medical Academy, St. Petersburg, whose experiments with dogs won him international acclaim in the medical field.

"Not unlike the way Pavlov conditioned his dogs," Esther Vilar writes in her book, "men have been trained and conditioned by women into becoming their slaves."

Dr. Vilar's "The Manipulated Man" is 184 pages of challenging reading, just published by Farrar, Straus and Giroux of New York, priced at \$5.95.

Dr. Vilar was born of German parents in Buenos Aires, Argentina, in 1935. Her married life with German author Klaus Wagn spanned two years and they have a 7-year-old son.



Placidyl® (ETHCHLORVYNOL) Brief Summary

Indications—Placidyl (ethchlorvynol) is indicated for short-term hypnotic therapy in the management of insomnia.

Contraindications—Drug hypersensitivity and porphyria.

Warnings—Not recommended during the first and second trimester of pregnancy. Caution patients against possible combined exaggerated effects with alcohol, barbiturates, tranquilizers or other CNS depressants. Exaggerated effects might result in impairment of vision, paralysis of accommodation and loss of hypnosis. Caution patients concerning the use of a motor vehicle, operating machinery, or hazardous operations requiring alertness after taking the drug. Administer with caution to patients with suicidal tendencies and do not prescribe large quantities of the drug. Adjustment of dosage of oral anticoagulants might be necessary when beginning ethchlorvynol therapy, during therapy, or after stopping therapy. This drug is not recommended for use in children. PLACIDYL HAS THE POTENTIAL FOR THE DEVELOPMENT OF PSYCHOLOGICAL AND PHYSICAL DEPENDENCY. INSTANCES OF SEVERE WITHDRAWAL SYMPTOMS, INCLUDING CONVULSIONS AND DELIRIUM CLINICALLY SIMILAR TO THOSE SEEN WITH BARBITURATES, HAVE BEEN REPORTED IN PATIENTS TAKING REGULAR DOSES AS LOW AS 1000 MG. PER DAY OVER A PERIOD OF SEVERAL MONTHS WHEN THE DRUG WAS SUDDENLY DISCONTINUED. PROLONGED ADMINISTRATION OF PLACIDYL DRUG IS NOT RECOMMENDED. Addiction-prone patients or those who are likely to increase their use of the drug on their own initiative should be observed for evidence of signs or symptoms which may indicate possible early withdrawal or abstinence symptoms. Signs and symptoms associated with withdrawal and abstinence include undue anxiety, tremor, ataxia, slurring of speech, weight loss, perceptual distortions, irritability, confusion and delirium. Other less well defined signs and symptoms, not necessarily due to withdrawal and abstinence, may include anorexia, nausea or vomiting, weakness, dizziness, sweating, muscle twitching and weight loss. Abrupt discontinuance of Placidyl following prolonged overdosage may result in convulsions and delirium.

Precautions—Toxic amblyopia has been reported with long-term continuous use of ethchlorvynol. Permanent visual defects have been observed, although amblyopia has improved after discontinuance of the drug. Drug dosage should be limited in elderly and debilitated patients to the smallest effective amount. If pain is present, this drug should only be given if insomnia persists after it is controlled with analgesics. Caution is advised in prescribing the drug for patients who are being treated with either MAO inhibitors or antidepressants. Transient delirium has been reported with the combination of Placidyl and amitriptyline. Drug dosage should be reduced if prescribed for patients receiving MAO inhibitors or antidepressants. Caution should be exercised in patients with impaired hepatic or renal function. Patients respond unpredictably to barbiturates or alcohol or who exhibit excitement and release of inhibition in association with such agents, may also respond in this way to Placidyl. Rarely, patients may exhibit symptoms suggestive of an unusual susceptibility to the drug; such as prolonged hypnosis, profound muscular weakness, excitement, hysteria, and syncope without marked hypotension. Transient weakness or ataxia may occur.

Adverse Reactions—Hypotension, nausea or vomiting, gastric upset, aftertaste, blurring of vision, numbness, facial numbness, and allergic reaction manifested by urticaria have been reported following Placidyl administration. Mild "hangover" and symptoms of mild excitation have occurred in some patients. There have been rare reports of cholestatic jaundice occurring in patients taking ethchlorvynol. A few cases of thrombocytopenia have been reported in patients receiving ethchlorvynol. 302430



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- ☐ phenobarbital—for associated anxiety and tension

Contraindications: Hypersensitivity to barbiturates or belladonna alkaloids, glaucoma, advanced renal or hepatic disease.

Precautions: Administer with caution to patients with incipient glaucoma, bladder neck obstruction or urinary bladder atony. Prolonged use of barbiturates may be habit-forming.

Side effects: Blurred vision, dry mouth, dysuria, and other

atropine-like side effects may occur at high doses, but are only rarely noted at recommended dosages.

Dosage: Adults: One or two tablets three or four times daily. Dosage can be adjusted depending on diagnosis and severity of symptoms.

Children 2 to 12 years: One-half or one tablet three or four times daily. Tablets may be chewed or swallowed with liquids.



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(from the Greek *kinetikos*,
to move,
and the Latin *sedatus*,
to calm)

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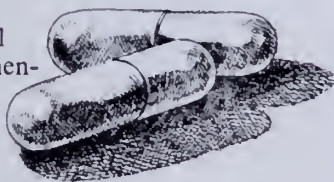
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ore about Librax®

Helps reduce anxiety-related G.I. symptoms

A patient may blame his attacks of gastritis or duodenitis on "something he ate" but contributing factors may be his job, marital problems, financial worries or some other unmentioned source of stress and excessive anxiety that exacerbated the condition. Whether it is "something he ate" or "something eating him," adjunctive Librax can help. Librax offers both the antianxiety action of Librium® (chlordiazepoxide HCl), that can help relieve excessive anxiety, and the dependable anticholinergic action of Quarzan® (clidinium Br), that can help reduce gastrointestinal hypermotility and hypersecretion.



Patient-oriented dosage — up to 8 capsules daily in divided doses

For optimal response, dosage can be adjusted to suit patient needs—1 or 2 capsules, 3 or 4 times a day.

To help relieve anxiety-linked symptoms in gastritis and duodenitis adjunctive **Librax®**

Each capsule contains 5 mg chlordiazepoxide HCl and 2.5 mg clidinium Br.

Before prescribing, please consult complete product information, summary of which follows:

Contraindications: Patients with glaucoma; prostatic hyperrophy and benign bladder neck obstruction; known hypersensitivity to chlordiazepoxide hydrochloride and/or clidinium bromide.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering Librium (chlordiazepoxide hydrochloride) to known addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards. As with all anticholinergic drugs, an inhibiting effect on lactation may occur.

Precautions: In elderly and debilitated, limit dosage to smallest effective amount to preclude development of ataxia, oversedation or confusion (not more than two capsules per day initially; increase gradually as needed and tolerated). Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients. Employ usual precautions

in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: No side effects or manifestations not seen with either compound alone have been reported with Librax. When chlordiazepoxide hydrochloride is used alone, drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally with chlordiazepoxide hydrochloride, making periodic blood counts and liver function tests advisable during protracted therapy. Adverse effects reported with Librax are typical of anticholinergic agents, i.e., dryness of mouth, blurring of vision, urinary hesitancy and constipation. Constipation has occurred most often when Librax therapy is combined with other spasmolytics and/or low residue diets.



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standing
made Man safer
from attack but
increased blood
pressure in
hemorrhoidal
veins

Precaution

Prolonged or excessive use of Anusol-HC might produce systemic corticosteroid effects.

Symptomatic relief should not delay definitive diagnosis or treatment.

Dosage and Administration

Anusol-HC: One suppository in the morning and one at bedtime for 3 to 6 days or until the inflammation subsides.

Regular Anusol: one suppository in the morning, one at bedtime, and one immediately following each evacuation.

to help ease
acute symptoms of
hemorrhoids

Anusol-HC

Hemorrhoidal Suppositories with Hydrocortisone Acetate. On your Rx: Each suppository contains hydrocortisone acetate 10 mg; bismuth subgallate 2%; bismuth resorcin compound 1.75%; benzyl benzoate 1.2%; Peruvian balsam 1.8% oxide 11.0%; and boric acid 5.0%; plus the following inactive ingredients: bismuth subiodide, calcium phosphate, and coloring in a bland hydrocarbon vegetable oil base containing cocoa butter.

for long-term
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Anusol

Suppositories and Ointment Each suppository or ointment contains the active ingredients of an Anusol suppository minus the hydrocortisone.

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ANGP 33

Technology In 1972

The year 1972 saw further progress toward the marriage of engineering and medicine, as space-age technology was applied to medical practice. Among the improvements in medical science cited by Dr. William Barclay, assistant executive vice president for scientific affairs of the American Medical Association, are: non-irritating prosthetic materials to replace blood vessel segments, heart valves and hip and finger joints; automatic equipment for many biochemical procedures, including a blood sample analyzer, a microscope that reads cancer smears,

a mass spectrograph with the ability to identify chemicals, and a sequential amino acid analyser that may be able to determine the genetic causes of birth defects; use of a carbon dioxide laser for microscopic nose and throat surgery; a nuclear-powered cardiac pacemaker that is expected to last up to five times as long as conventional pacemakers without surgical replacement; use of improved, flexible fiberoptics in diagnosis and treatment of diseases of the colon, duodenum and pancreas, and cryosurgery on bone and visceral tumors.

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Information Booklet On High Blood Pressure Now Available For Patients

When is blood pressure "high"? What are the dangers of hypertension? Why are women apparently less vulnerable to the effects of high blood pressure than men are? Why does it affect so many black persons?

Now recognized as a major health problem, hypertension (high blood pressure) probably affects from 20 million to 25 million adults in the United States, and it is believed that one-half of those suffering from the disease go undetected. The possible causes of hypertension, how it can be controlled, and the unsolved mysteries surrounding it, are discussed in **WATCH YOUR BLOOD PRESSURE!** by Theodore Irwin. This new Public Affairs Pamphlet is available for 35 cents from the Public Affairs Committee, 381 Park Avenue South, New York, N. Y. 10016.

Blood pressure, Irwin explains, is the force exerted by the flowing blood against the walls of the arteries (blood vessels) that carry blood from the heart to all parts of the body. "The pumping action of the heart creates the force. . . . Every time the heart beats, the pressure increases; when the heart relaxes between beats, the pressure goes down." In cases of hypertension, "increased blood pressure results from the constriction of millions of tiny blood vessels called arterioles. . . . The shrinking of the arterioles resists the flow of blood, forcing pressure up in the arteries." When blood pressure readings go up to 140/90 and persistently remain at that level, or higher, a case of hypertension exists.

The chief danger of hypertension is in the toll it takes on other parts of the body. Untreated hypertension can damage vital organs, particularly the heart, brain and kidneys. Stroke is one of the real hazards of high blood pressure, but fortunately it is not inevitable.

Irwin notes that in its early stages high blood pressure is difficult to detect, which is why the disease is sometimes labeled a

"silent killer." Some symptoms to see a doctor about are occasional bothersome headaches, particularly in the back of the head and upper part of the neck, dizziness, shortness of breath, excessive flushing of face, fatigue, or insomnia. Of course, these symptoms are common to other disorders, too; but only a physician should do the diagnosing. And early detection makes hypertension easier to control.

What causes hypertension? **WATCH YOUR BLOOD PRESSURE!** points out that recent studies indicate personality and environment are definitely significant factors. There may well be a "hypertensive personality," inclined to be "irritable, anxious, restless, and tense." Inheritance is another suspected factor in high blood pressure cases, since the disease often runs in families. Other possible contributing causes are: a change in body chemistry, heavy cigarette smoking, a high-fat, high-salt diet.

"At present," according to Irwin, "high blood pressure is the major disease suffered by this country's black population, as well as the most important factor in their shorter life expectancy." Not surprisingly, stressful living in inner-city high-crime areas is thought to account for the unusually large number of hypertensive black persons among the urban black population. Black people who do not live in big-city ghettos have been found to have blood pressure levels comparable to those of whites.

Fortunately, in most cases proper treatment can control high blood pressure. Eliminating salt from the diet curbs the body's retention of fluid and, in about one out of three hypertension cases, leads to some lowering of blood pressure. Cutting down on calories and certain kinds of fat may also be advised. In addition, now doctors have an arsenal of drugs for those patients whose blood pressure levels are serious

(Continued on Page 590)

IN ASTHMA IN EMPHYSEMA



*optional
therapy*



THE mudranes®

All Mudranes are bronchodilator-mucolytic in action, and are indicated for symptomatic relief of bronchial asthma, emphysema, bronchiectasis and chronic bronchitis. **MUDRANE tablets** contain 195 mg. potassium iodide; 130 mg. aminophylline; 21 mg. phenobarbital (Warning: may be habit-forming); 16 mg. ephedrine HCl. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline-phenobarbital-ephedrine combinations. **Iodide side-effects:** May cause nausea. Very long use may cause goiter. Discontinue if symptoms of iodism develop. **Iodide contraindications:** Tuberculosis; pregnancy (to protect the fetus against possible depression of thyroid activity). **MUDRANE-2 tablets** contain 195 mg. potassium iodide; 130 mg. aminophylline. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline. **Iodide side-effects and contraindications** are listed above. **MUDRANE GG tablets** contain 100 mg. glyceryl guaiacolate; 130 mg. aminophylline; 21 mg. phenobarbital (Warning: may be habit-forming); 16 mg. ephedrine HCl. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline-phenobarbital-ephedrine combinations. **MUDRANE GG-2 tablets** contain 100 mg. glyceryl guaiacolate; 130 mg. aminophylline. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions:** Those for aminophylline. **MUDRANE GG Elixir.** Each teaspoonful (5 cc) contains 26 mg. glyceryl guaiacolate; 20 mg. theophylline; 5.4 mg. phenobarbital (Warning: may be habit-forming); 4 mg. ephedrine HCl. **Dosage:** Children, 1 cc for each 10 lbs. of body weight; one teaspoonful (5 cc) for a 50 lb. child. Dose may be repeated 3 or 4 times a day. Adult, one tablespoonful, 4 times daily. All doses should be followed with $\frac{1}{2}$ to full glass of water. **Precautions:** See those listed above for Mudrane GG tablets.

MUDRANE—original formula

First choice

MUDRANE-2

*When ephedrine is too exciting
or is contraindicated*

MUDRANE GG

*During pregnancy or when K.I. is
contraindicated or not tolerated*

MUDRANE GG-2

A counterpart for Mudrane-2

MUDRANE GG ELIXIR

*For pediatric use
or where liquids are preferred*

*Clinical specimens
available to physicians.*

WILLIAM P. POYTHRESS & COMPANY, INC., RICHMOND, VIRGINIA 23217

Manufacturers of Ethical Pharmaceuticals



High Blood Pressure

(Continued from Page 588)

enough to warrant their use. Although drugs now in use are effective, they are expensive and not without side effects. "The goal of developing a uniformly effective, completely nontoxic, inexpensive, single drug has not yet been attained."

WATCH YOUR BLOOD PRESSURE! stresses the fact that patients themselves—and their families—have an important role to play in the treatment of high blood pressure. Among Irwin's suggestions:

- Cooperate all the way with your doctor. Take your medication faithfully and stick with the special diet.
- Try to apply moderation to your way of life. Rest, relaxation, and recreation are important adjuncts to work and

responsibility. Family members can cooperate by keeping the home atmosphere as tension-free as possible.

- Cut out cigarette smoking.
- Don't try quack remedies—they will not lower your blood pressure. Once you have chosen a qualified physician, rely on him.

WATCH YOUR BLOOD PRESSURE! is No. 483 in the Public Affairs Pamphlet series, now in its 37th year. The series includes many other helpful titles covering health and science, family relations, social and economic problems, race relations. All pamphlets are 35 cents each; a list is available on request. Write to the Public Affairs Committee, a nonprofit educational organization, 381 Park Avenue South, New York, N. Y. 10016.

Gains In Cancer Research

(Continued from Page 570)

University of Minnesota researchers isolated a similar RNA virus from seven different patients that transformed normal cells into cancer cells in a test tube.

A reliable method for detecting a form of cancer that affects infants and young children and a new means of studying cancer cells in the laboratory were perfected this year.

Scientists at NIH succeeded in creating an artificial circulatory network in a test tube that will sustain live animal cells in a density resembling the normal density of body tissue. Nutrients in the system can be altered for easy observation of conditions that promote or inhibit the growth of cancer cells. Drs. Richard Knazek and Pietro Gullino believe the network can also act as a factory for hormones that are difficult to obtain by any other means.

A simple, inexpensive test for neuroblastoma—a highly malignant tumor second only to accidents as a cause of death in children—may make mass screening for the disease possible in the future. Developed by Dr. Arnold Leonard of the University of Minnesota School of Medicine, the treated paper strips, which can be dipped into a urine sample or simply placed on a wet diaper, turn orange when they come in contact with excess catecholamine or 3-methoxy-4-hydroxymandelic acid, secreted by up to 80 per cent of children with neuroblastoma.

And finally, as a result of previous research and experimentation with drugs and combined treatments, certain cancers can now be regarded in terms of cures. Among them are: cancer of the placenta; Hodgkin's disease; Burkitt's lymphoma; cancer of the lymph tissues; reticulum cell sarcoma; embryonic testicular cancer; Wilms' tumor; acute lymphocytic leukemia; retinoblastoma; and Ewing's tumor.

"The history of science, and in particular the history of medicine... is... the history of man's reactions to the truth, the history of the gradual revelation of truth, the history of the gradual liberation of our minds from darkness and prejudice."

—George Sarton, from "The History of Medicine Versus the History of Art"

Are combination drug products useful in treatment involving concomitant use of two or more drugs?

Opinion

Results of a questionnaire to 7,000 physicians:

62.9%

Believe combination drug products are useful.

13.8%

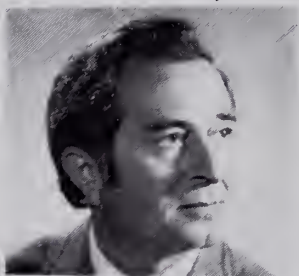
Do not believe combination drug products are useful.

Are combination drug products useful in treatment involving concomitant use of two or more drugs?

Opinion & Dialogue

Doctor of Medicine

Louis Lasagna, M.D.
Professor and Chairman
Department of
Pharmacology & Toxicology
University of Rochester
School of Medicine
and Dentistry



Obviously, many drugs are given concomitantly. Whether it makes sense to combine medications in one preparation, be it capsule, tablet, or liquid, is a question that can be answered only by examining the advantages and disadvantages in the individual case.

Among the advantages is, first of all, convenience. The more medications that are taken concurrently and the more complicated the directions, the less likely the patient is to take medications accurately. From the standpoint of convenience and accuracy, and economy as well, you can make an important case for putting medications together in one preparation, as long as they are compatible.

By the same token, when you prescribe a properly tested and rational combination, you should have less worry about pharmaceutical or pharmacological compatibility — and about reasonable dosage ratios as well. Compatibility of the formulation should be demonstrated in the laboratory and clinic before the product is available for prescription—which is more than can usually be said for

the physician's own spontaneous creations. And, the dosage ratios employed in rational precompounded combinations are designed to meet the needs of substantial numbers of "typical" patients.

There is no doubt that many "atypical" patients are to be found, and for them the prefabricated combination must be rejected. But that hardly argues for eliminating rational combinations from the market. Think, for example, of the problems that would arise if the components of widely accepted combinations, like the oral contraceptives and the diuretic-antihypertensives, always had to be prescribed, purchased and ingested separately.

One disadvantage that comes to mind is some doctors' unawareness of the ingredients a given combination contains. For example, a doctor might know that a patient is allergic to aspirin but forget that a certain analgesic mixture, which he knows only by its trade name, contains aspirin. His prescription, then, causes considerable discomfort, to say the least. This problem is a function of physician education, rather than of combination therapy as such. Improving doctors' knowledge about all medicaments they prescribe is a problem that deserves tackling on its own.

Another accusation leveled at combination drugs is that they encourage sloppiness of diagnosis and treatment. In many cases, however, a combination may prove to be the most effective choice. A good ex-

ample of the usefulness of combinations appears in a recent article in the *Journal of Chronic Diseases* on the efficacy and side effects of an antihypertensive containing three ingredients, in which the track records of the combination drug and the individual ingredients were compared. Interestingly enough, whether the drugs were given individually or together, incidence and severity of side effects were the same. But blood pressure control was invariably better when the drugs were taken in one combination tablet than when they were taken separately (in "titratable" dosage) or in two or three different tablets.

Deciding which combinations constitute rational therapy obviously leads to a discussion of who is to determine which should be used and which should not. Realistically, I think combinations should be evaluated somewhat differently if they are old and established or new and untried.

In today's regulatory atmosphere, there is no possibility of a new combination being put on the market without a substantial amount of acceptable evidence in the form of controlled trials that show it to be safe and efficacious. On the other hand, I believe a different set of standards should apply to combination preparations that have been around for a long time. In other words, physician acceptance over a long period should be given some weight as evidence of the efficacy and safety of these drugs.

The FDA, however, does not seem to share this attitude. It often requires, for these older products, controlled trials that will monopolize the time of already overtired investiga-

tors and cost a great deal of money. I wish we agreed on a "grand clause" approach to combinations that have been on the market for a number of years that have an apparently satisfactory track record.

For example, I think some of the antibiotic combinations that were off the market by the time they had been performed quite well — especially penicillin-streptomycin combinations that were given in injection — especially surgical patients — were given less discomfort for the patient, less demand on nurses' time, and opportunities for errors. To take preparation off the market doesn't seem to be the way to improve medicine, unless an older preparation showed a great harm from the use (rather than the abuse) of the combination.

The point that should be emphasized is that there are both rational and irrational combination preparations. The real question is, who determines which is which? Obviously, the FDA plays a major role in making this determination. I don't think it is the responsibility of the physician to avoid taking the responsibility, but I do think it is the responsibility of physicians and experts in assessing the evidence in making the ultimate decision.

Maker of Medicine

Clarke Wescoe, M.D.
President
Anthrop Laboratories



two medications are effectively to treat a condition, and it is in that they are complete, it clearly is useful convenient to provide in one dosage form. could make no sense, in it would be pedantic, assist they always be described separately. To the appearance of entry, the "expert" de- the combination be- it is a fixed dosage. When the "expert" es the concept of fixed ze form he obscures fact that single-ingre-pharmaceutical preparations are also fixed ge forms. By a singular untic exercise he im- a pejorative meaning he term "fixed dose" when he uses it with ect to combinations. t is ignored is the sim- fact that only in the st of circumstances any physician attempt trate an exact ther- ic response in his pa- . It is quite possible some aches and pains respond to 500 mg. of in yet that fact does nilitate against the us- lose being 650 mg. re other semantic ploy a called into play is to ribe a combination uct as rational or irra- l. ke antibiotic mixtures, source of much of the cism generated against

combinations generally. Obviously, no one should be exposed willy-nilly to the potential side effects of two or three antibiotics when only one is needed. At the same time there are cases where it is prudent to prescribe more than one. The clinician is the judge in these circumstances, as he should be.

There is no clear definition of the word rational. Most persons, I suppose, would find it synonymous with reasonable, but in many circumstances it may best be defined as the opinion of those in power at the moment.

Other factors govern combination therapy, not the least of which has been its broad use by practicing physicians anxious to achieve convenience in prescribing, to reduce medication error, and to save money for their patients. Combinations clearly have met the test on all three counts.

I have been impressed by studies showing that the rate of error climbs markedly with the number of medications to be taken, even with sophisticated patients. When medically justified, therefore, this factor alone supports the logic of combination therapy.

The cost argument for combinations appears to be irrefutable. In 1971, R. A. Gosselin studied the 71 combination products (excluding oral contraceptives) among the 200 most prescribed drugs. The study found that if all 71 products were discontinued, and if each ingredient in these combinations were prescribed separately, the price of medicines to patients would jump by \$443.2 million on a national basis! At a time when the cost of medical care is under so much fire, it would be nonsensical to boost costs without clearly irre-

futable medical reasons.

The part played by government on this question, of course, is fundamental. The FDA should play a role in determining which combinations are reasonable. That role, as defined by law and regulation, is to ensure that any medication on the market is safe and effective in line with its label claims. Certainly combinations are entitled to as much consideration as single entities—neither more nor less. So long as the addition of one drug to another does not make either less safe, or less effective, so long as they are compatible in a formulation, we have a reasonable product. It makes no sense to recommend the use of two products for certain conditions and to deny their being combined in a single form. An unhappy side effect of the problem concerns the efficacy panel discussions of many products submitted for review. The term "effective, but" has been freely interpreted to mean "ineffective" in toto, regardless of the merit of the individual drugs. This interpretation has placed numerous useful combination products in needless jeopardy.

In reading the actual reports of the review panels, it seems clear that some of the ratings were based less on scientific research and clinical observation than on the "informed" opinions of the panelists. These "informed" opinions were accepted at face value, while

the "informed" opinions of others who had used the products were rejected. All of this put combination products into a sort of scientific never-never land.

It should be kept in mind by all, government as well as others involved in our health care system, that advances in therapy are seldom made in leaps and bounds but rather by small painstaking steps—and that some of these steps have resulted from research in combination drugs as well as with single entities. Given the near-infinite biologic variation in patient response, this is hardly surprising to clinicians. It should not be to regulatory agencies either.

In the end, the practicing physician is in the best position to decide if a particular combination makes sense. Such a decision should not be made exclusively by those whose responsibility for continuing clinical care is limited. Clinicians are the best judges of efficacy because the ultimate proof of any product's effectiveness is acceptance by physicians who have observed its actions in patients over time. The corollary statement may be made about over-the-counter medicines, which would not long survive if they failed to afford the relief the user anticipates. That the antihistamine in a "cold" remedy may not *always* be necessary is no reason to proscribe the combination generally.

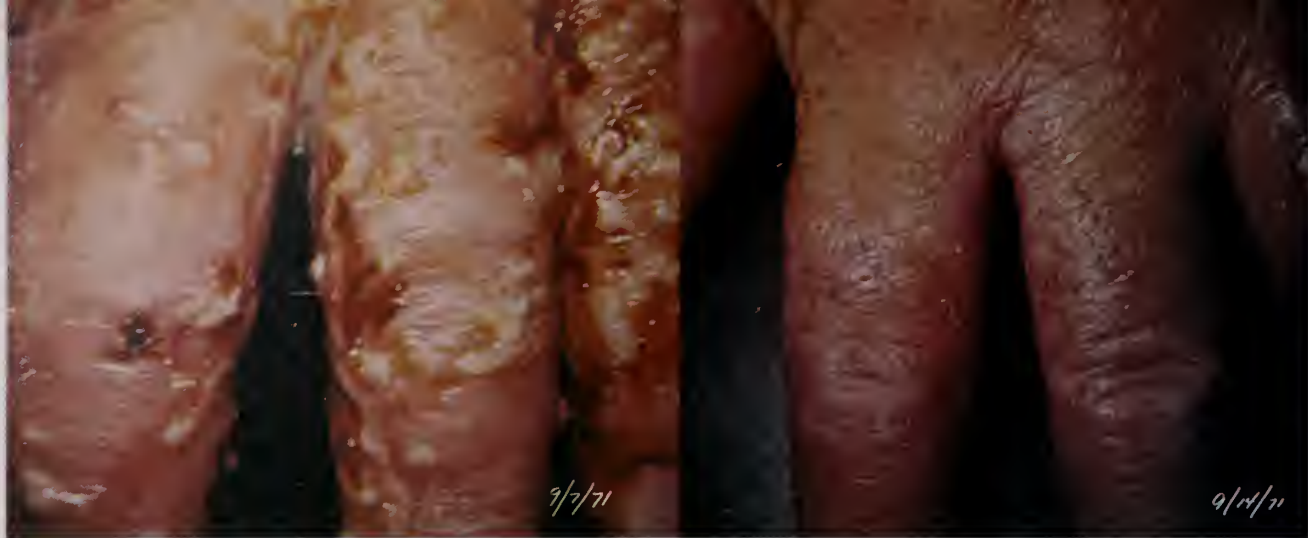
Opinion & Dialogue

What is your opinion, doctor?

We would welcome your comments.



The Pharmaceutical Manufacturers Association
1155 Fifteenth Street, N.W., Washington, D.C. 20005



MINOCIN® made the difference in just eight days.*

Clinical Data:

Patient: 47-year-old male.

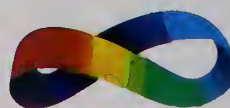
Diagnosis: Severe pyoderma, left hand.

Culture: *Staphylococcus aureus*, coagulase positive and sensitive to MINOCIN.

Temperature: 102° F

Therapy: MINOCIN Minocycline HCl Capsules, 100 mg: 200 mg *stat*, 100 mg every 12 hours. Medication began 9/7/71. By fourth day, temperature was normal and pustular lesions considerably improved. Last dose taken 9/14/71.

Concomitant therapy: None.†



Semisynthetic

MINOCIN®
MINOCYCLINE HCl

Capsules, 100 mg: 2 *stat*, 1 q 12 h.

Indications: For the treatment of susceptible infections; e.g., *E. coli*, *D. pneumoniae*. For full list of approved indications consult labeling.

Contraindications: Hypersensitivity to any tetracycline.

Warnings: The use of tetracyclines during tooth development (last half of pregnancy, infancy and childhood to the age of 8 years) may cause permanent discoloration of the teeth (yellow-gray-brown). This is more common during long-term use but has been observed following repeated short-term courses. Enamel hypoplasia has also been reported. Tetracyclines, therefore, should not be used in this age group unless other drugs are not likely to be effective or are contraindicated. In renal impairment, usual doses may lead to excessive accumulation and liver toxicity. Under such conditions, use lower total doses, and, in prolonged therapy, determine serum levels. Photosensitivity manifested by an exaggerated sunburn reaction has also been observed in some individuals taking tetracyclines. Advise patients apt to be exposed to direct sunlight or ultraviolet light that such reaction can occur, and discontinue treatment at first evidence of skin erythema. Studies to date indicate that photosensitivity does not occur with MINOCIN Minocycline HCl. In patients with significantly impaired renal function, the antianabolic action of tetracycline may cause an increase in BUN, leading to azotemia, hyperphosphatemia, and acidosis. CNS side effects (lightheadedness, dizziness, vertigo) have been reported, may disappear during therapy, and always disappear rapidly when drug is discontinued. Caution patients who experience these symptoms about driving vehicles or using hazardous machinery while taking this drug.

Pregnancy: In animal studies, tetracyclines cross the placenta, are found in fetal tissues, and can have toxic effects on the developing fetus (often related to retardation of skeletal development). Embryotoxicity has been noted in animals treated early in pregnancy. Safety of use during human pregnancy has not been established. **Newborns, infants and children:** All tetracyclines form a stable calcium complex in any bone-forming tissue. Prematures, given oral doses of 25 mg./kg. every 6 hours, demonstrated a decrease

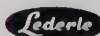
in fibula growth rate, reversible when drug was discontinued. Tetracyclines are present in the milk of lactating women who are taking a drug of this class.

Precautions: Use may result in overgrowth of nonsusceptible organisms, including fungi. If superinfection occurs, institute appropriate therapy. In venereal diseases when coexistent syphilis is suspected, darkfield examination should be done before treatment is started and blood serology repeated monthly for at least four months. Because tetracyclines have been shown to depress plasma prothrombin activity, patients on anticoagulant therapy may require downward adjustment of such dosage. Test for organ system dysfunction (e.g., renal, hepatic and hemopoietic) in long-term use. Treat all Group A beta hemolytic streptococcal infections for at least 10 days. Avoid giving tetracycline in conjunction with penicillin.


Adverse Reaction: GI: (with both oral and parenteral use): anorexia, nausea, vomiting, diarrhea, glossitis, dysphagia, enterocolitis, inflammatory lesions (with monilial overgrowth) in anogenital region. **Skin:** maculopapular and erythematous rashes. Exfoliative dermatitis (uncommon). Photosensitivity is discussed above ("Warnings"). **Renal toxicity:** rise in BUN, dose-related (see "Warnings"). **Hypersensitivity reactions:** urticaria, angioneurotic edema, anaphylaxis, anaphylactoid purpura, pericarditis, exacerbation of systemic lupus erythematosus. In young infants, bulging fontanels have been reported following full therapeutic dosage, disappearing rapidly when drug was discontinued. **Blood:** hemolytic anemia, thrombocytopenia, neutropenia, eosinophilia. **CNS:** (see "Warnings.") When given in high doses, tetracyclines may produce brown-black microscopic discoloration of thyroid glands; no abnormalities of thyroid function studies are known to occur.

NOTE: Concomitant therapy: Antacids containing aluminum, calcium, or magnesium impair absorption; do not give to patients taking oral minocycline. Studies to date indicate that absorption of MINOCIN is not notably influenced by foods and dairy products.

*Indicated in infections due to susceptible organisms. Culture and sensitivity testing recommended. Tetracyclines are not the drugs of choice in the treatment of any staphylococcal infection.
†Case Report, Clinical Investigation Department, Lederle Laboratories.



LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York 10965 12-20 436-2



**Who
killed
the
wicked
itch**

(and the infection)*

?

snow white
Sporostacin Cream

TRADEMARK

(chlordantoin 1% and benzalkonium chloride 0.05%)

After you write your prescription for two tubes of soothing, fungicidal Sporostacin Cream, tell your patient not to be fooled by the quick relief of symptoms it affords. Make sure she knows how to use it as directed—for the *full* 14-day course of therapy. Then, on follow-up, you'll usually find that nonstaining, easy-to-use Sporostacin Cream has finished off vulvovaginal candidiasis in the nicest possible way.

two tubes...two weeks



*

Indication: Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indication as follows:

"Probably" effective: For the treatment of vulvovaginal candidiasis.

Final classification of the less-than-effective indications requires further investigation.

Contraindications: None known. **Precautions:** Cases of sensitization and irritation have been reported. When noted the drug should be discontinued. **Dosage:** One applicatorful intravaginally twice daily for a period of 14 days. Course of therapy may be repeated if necessary.

Ortho Pharmaceutical Corporation • Raritan, New Jersey 08869

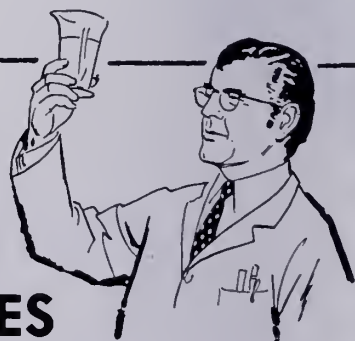


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Dependability
Friendliness
Integrity
Reliability

Before deciding to make Valium (diazepam) part of your treatment plan, check on whether or not the patient is presently taking drugs and, if so, what his response has been. Along with the medical and social history, this information can help you determine initial dosage, the possibility of side effects and the ultimate prospects of success or failure.

While Valium can be a most helpful adjunct to your counseling, it should be prescribed only as long as excessive psychic tension persists and should be discontinued when you decide it has accomplished its therapeutic task. In general, when dosage guidelines are followed, Valium is well tolerated (see Dosage). For convenience it is available in 2-mg, 5-mg and 10-mg tablets.

Drowsiness, fatigue and ataxia have been the most commonly reported side effects.

Until response is determined, patients receiving Valium should be cautioned against engaging in hazardous occupations requiring complete mental alertness, such as driving or operating machinery.



Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

Dosage: Individualize for maximum beneficial effect.

Adults: Tension, anxiety and psychoneurotic states, 2 to 10 mg b.i.d. to q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; adjunctively in skeletal muscle spasm, 2 to 10 mg t.i.d. or q.i.d.; adjunctively in convulsive disorders, 2 to 10 mg b.i.d. to q.i.d. **Geriatric or debilitated patients:** 2 to 2½ mg, 1 or 2 times daily initially, increasing as needed and tolerated. (See Precautions.) **Children:** 1 to 2½ mg t.i.d. or q.i.d. initially, increasing as needed and tolerated (not for use under 6 months).

Supplied: Valium® (diazepam) Tablets, 2 mg, 5 mg and 10 mg; bottles of 100 and 500. All strengths also available in Tel-E-Dose® packages of 1000.

Valium® (diazepam)

To help you manage excessive psychic tension

THE JOURNAL

of the

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State Health Officer

Ira L. Myers, M. D. Montgomery

Delegates and Alternates to the American Medical Association

(Terms expiring December 31 of year shown.)

1973

Delegate—O. Emfinger, M. D. Union Springs

Alternate—E. B. Glenn, M. D. Birmingham

Delegate—Paul W. Burleson, M. D. Birmingham

Alternate—J. Michaelson, M. D. Foley

1974

Delegate—W. E. White, M. D. Anniston

Alternate—Alfred Habeeb, M. D. Birmingham

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Indications: Acute gouty arthritis, rheumatoid arthritis, rheumatoid spondylitis.

Contraindications: Children 14 years or less; senile patients; history or symptoms of G.I. inflammation or ulceration including severe, recurrent or persistent dyspepsia; history or presence of drug allergy; blood dyscrasias; renal, hepatic or cardiac dysfunction; hypertension; thyroid disease; systemic edema; stomatitis and salivary gland enlargement due to the drug; polymyositis rheumatica and temporal arteritis; patients receiving other potent chemotherapeutic agents, or long-term anticoagulant therapy.

Warnings: Age, weight, dosage, duration of therapy, existence of concomitant diseases, and concurrent potent chemotherapy affect incidence of toxic reactions. Carefully instruct and observe the individual patient, especially the aging (forty years and over) who have increased susceptibility to the toxicity of the drug. Use lowest effective dosage. Weigh initially unpredictable benefits against po-

tential risk of severe, even fatal, reactions. The disease condition itself is unaltered by the drug. Use with caution in first trimester of pregnancy and in nursing mothers. Drug may appear in cord blood and breast milk. Serious, even fatal, blood dyscrasias, including aplastic anemia, may occur suddenly despite regular hemograms, and may become manifest days or weeks after cessation of drug. Any significant change in total white count, relative decrease in granulocytes, appearance of immature forms, or fall in hematocrit should signal immediate cessation of therapy and complete hematologic investigation. Unexplained bleeding involving CNS, adrenals, and G.I. tract has occurred. The drug may potentiate action of insulin, sulfonylurea, and sulfonamide-type agents. Carefully observe patients taking these agents. Nontoxic and toxic goiters and myxedema have been reported (the drug reduces iodine uptake by the thyroid). Blurred vision can be a significant toxic symptom worthy of a complete ophthalmological examination. Swelling of ankles or face in patients under sixty may be prevented by reducing dosage. If edema occurs in patients over sixty, discontinue drug.

Precautions: The following should be accomplished at regular intervals: Careful detailed history for disease being treated and detection of earliest signs of adverse reactions; complete physical examination including check of patient's weight; complete weekly (especially for the aging) or an every two week blood check; pertinent laboratory studies. Caution patients about participating in activity requiring alertness and coordination, as driving a car, etc. Cases of leukemia have been reported in patients with a history of short- and long-term therapy. The majority of these patients were over forty. Remember that arthritic-type pains can be the presenting symptom of leukemia.

Adverse Reactions: This is a potent drug; its misuse can lead to serious results. Review detailed information before beginning therapy. Ulcerative esophagitis, acute and reactivated gastric and duodenal ulcer with perforation and hemorrhage, ulceration and perforation of large bowel, occult G.I. bleeding with anemia,

gastritis, epigastric pain, hematemesis, dyspepsia, nausea, vomiting and diarrhea, abdominal distention, agranulocytosis, aplastic anemia, hemolytic anemia, anemia due to blood loss including occult G.I. bleeding, thrombocytopenia, pancytopenia, leukemia, leukopenia, bone marrow depression, sodium and chloride retention, water retention and edema, plasma dilution, respiratory alkalosis, metabolic acidosis, fatal and nonfatal hepatitis (cholestasis may or may not be prominent), petechiae, purpura without thrombocytopenia, toxic pruritus, erythema nodosum, erythema multiforme, Stevens-Johnson syndrome, Lyell's syndrome (toxic necrotizing epidermolysis), exfoliative dermatitis, serum sickness, hypersensitivity angitis (polyarteritis), anaphylactic shock, urticaria, arthralgia, fever, rashes (all allergic reactions require prompt and permanent withdrawal of the drug), proteinuria, hematuria, oliguria, anuria, renal failure with azotemia, glomerulonephritis, acute tubular necrosis, nephrotic syndrome, bilateral renal cortical necrosis, renal stones, ureteral obstruction with uric acid crystals due to uricosuric action of drug, impaired renal function, cardiac decompensation, hypertension, pericarditis, diffuse interstitial myocarditis with muscle necrosis, perivascular granulomata, aggravation of temporal arteritis in patients with polymyalgia rheumatica, optic neuritis, blurred vision, retinal hemorrhage, toxic amblyopia, retinal detachment, hearing loss, hyperglycemia, thyroid hyperplasia, toxic goiter, association of hyperthyroidism and hypothyroidism (causal relationship not established), agitation, confusional states, lethargy; CNS reactions associated with overdosage, including convulsions, euphoria, psychosis, depression, headaches, hallucinations, giddiness, vertigo, coma, hyperventilation, insomnia; ulcerative stomatitis, salivary gland enlargement. (B)98-146-800-F (10/71)

For complete details, including dosage, please see full prescribing information.

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President's Page

What Position Do We Take?

In regard to the threatened revamping of our State Board of Health, there seems to be five possible positions open for our State Association to take.

The easiest position would be to do nothing and let an ill-informed and misinformed legislature revamp our State Board of Health.

Another position would be to cooperate with our opponents and agree to the appointment of a minimal number, perhaps three, of paramedical people. I feel that once this has been accomplished there will be continued dilution of our Board of Health with additional paramedical and lay personnel as has happened in many other states.

Another position would be to compromise with our opponents and agree to the admission of a minimal number of paramedical personnel with the Medical Association having veto power over this Board. This type of agreement would probably be workable, but I wonder how long our Association would be able to keep such veto power.

Another position would be to carry out an organized, concerted effort and inform all members of our State Legislature and Senate of the real issues involved. By organized effort, I mean special, called meetings of each county medical society, well-attended by its membership, with well-informed articulate individuals speaking to its legislative delegation assembled. I believe, by and large, all members of our State Legislature and Senate are basically honest individuals and they will support what they believe to be in the best



DR. PHILLIPPI

interests of the public. We have only to present the facts to them.

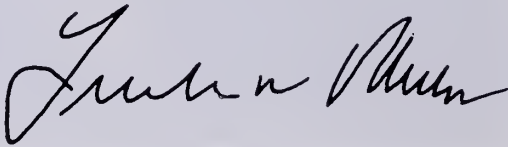
We are right in opposing paramedical people being placed on the Board of Health. How many of us would consent to paramedical hospital employees being placed on medical staffs of our hospitals? The addition of these people to our State Board of Health makes no more sense. We physicians do not claim to be more intelligent than our paramedical friends but we certainly have broader medical knowledge.

If we are able to carry out such an organized effort in every county, I do not believe there is any doubt that we would win. The only question is whether we can motivate our membership, are we willing, and will we do it?

We physicians in Alabama do not have to be conformists. Just because other states have submitted does not mean that we should do the same. For once I would like to see one state association stand up for what is best for the people they serve and make a concerted fight against our opponents, who

have by their own admission sought to gain membership on our State Board of Health for the enhancement of their own economics. Every time organized medicine meets defeat, politically, each physician loses, in the public eye. Whether medicine's stand be right or not makes very little difference.

If we are able to get our membership motivated at the county level to properly inform its representatives, and then if we should lose, I personally think that our Association should ask that no physician serve on the State Board of Health.



Frank M. Phillippi, Jr., M. D.

Medical Education And Health Manpower

Three new medical schools opened in September, 1972, another will open in January, 1973, and another in June, 1973—a total of 113 by the end of the 1972-73 academic year. The number of graduating seniors increased by 577 for a total of 9,551 in June, 1972.

The National Health Service Corps, a federal program providing health professionals for understaffed areas, made its first assignment to 122 locations this summer. One hundred fifty-two HEW physicians, 20 dentists, 72 nurses and 44 other health professionals were assigned, primarily to rural communities. A coordinate program of the American Medical Association, Project USA, provides physician replacements to relieve NHSC doctors when they must be away from the service communities.

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AUXILIARY PLEDGE

"I pledge my loyalty and devotion to the Woman's Auxiliary to the American Medical Association. I will support its activities, protect its reputation and ever sustain its high ideals."

Focus On VD

With venereal disease spreading to "epidemic proportions throughout the nation," and with the same pattern in Alabama, the Woman's Auxiliary has decided it is time to take a closer look at this problem and help in efforts for control. We are urging members to find methods of curbing this growing menace in each of their communities. Since education is the key to prevention and treatment, we continue to look for ways to get the message to the public, especially those under the age of 25. At the same time realizing that this disease is spreading in all ages and to all social and economic groups.

Education of the young to the dangers of VD should begin at home; regretfully, this is not done. Many parents do not have the knowledge, or find it embarrassing. Another good place is the school, but in some cases instruction concerning this subject is prohibited or the teacher lacks the interest or training. Auxiliary members are being asked to make it their responsibility to survey the situation in the schools in their communities and then offer their help in planning an educational program. Enlisting the help of the medical society is a must for such a project. By carefully selecting materials and films, and by using physicians as speakers, it is possible to develop an excellent program that can be used as a guide for years to come. One of the best program aids is a new film, "VD: A New Focus," available free on loan from the AMA Film Library in Chicago.



MRS. HANSBERRY

The Medical Society of New York has shown its interest and concern with this problem by using a mobile education unit. This attractive van visits college campuses, and junior and senior high schools. The portable equipment includes an audio-visual presentation, posters and pamphlets; and the students are told of the symptoms and consequences of venereal diseases. It has been well received by the public.

Publicity is no problem when carrying on an educational program. The newspaper, radio and T. V. are very cooperative. All they want is correct information from the medical society and the Auxiliary. Other

Nobel Prize

An American physician and an English biochemist shared the Nobel Prize for Medicine for their separate research on the molecular structure of antibodies. Gerald M. Edelman, M. D., PhD, professor of bio-

chemistry at Rockefeller University in New York, and Rodney R. Porter, PhD, professor of biochemistry, Trinity College, Oxford, capped 15 years of research on the body's defenses against infection by clarifying the composition of the antibody molecule.

THE WOMAN'S AUXILIARY

(Continued from Page 603)

organizations are also ready to help. Many people are concerned with this problem. They could be looking to us for help.

A. Rae Hansberry

A. Rae Hansberry
President

The entire sequence of 1,330 amino acids in an immunoglobulin molecule was determined by Dr. Edelman and his colleagues, who also classified five major groups of human immunoglobulins.

Application of the knowledge gained by the research these discoveries have stimulated could include cancer immunotherapy and the treatment of allergies, as well as improved survival rates in transplanted organs.

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How's Your Image?

Every once in a while, someone seriously suggests that the word "image" be banished from the glossary of public relations terms because it implies a false front . . . constructed by skillful wordsmiths to hide the shabby structure behind it.

They miss the point entirely. In its public relations-related sense, "image" means a mental representation or picture. It is a conception, an idea. It is a total impression.

For many years the mind's eye has viewed the physician as a man with solid scientific training who makes numerous sacrifices, is overworked, helpful, compassionate and can bring off minor medical miracles daily. Has this image slipped? Recent national surveys say it is slipping, but not to an alarming degree. I don't think we are in serious trouble yet in Alabama, but the time has come to encourage the physicians of this state to live up to the image we want retained.

There is no doubt that this nation has been swept up in a flood-tide of social and ecological concern. What has been accepted in the past is often rejected out of hand today, in the search for new answers to new questions.

Young people, in particular, question old values, old reputations. They don't seem to care about what you have done. They want to know what you're doing now. Concern over modern health care—the view that it is a right, not a privilege, is now radical

chic. Those who have tired of lunch counters, campus confrontations, grape pickers, and napalm factories have now turned their attention to health. We have seen the opening assault with the NBC special, "What Price Health."

Therefore, it is more important than ever to live up to the image . . . and communicate that fact. The times dictate the need for a change in the life-style of some physicians. Public displays of wealth provide ammunition for those who would destroy the image we cherish. We need more newspaper stories on the hundreds of physicians' wives who give their time unselfishly to volunteer service projects, not society page coverage of physicians' wives who give large cocktail parties and appear in designer originals.

A 1963 survey showed 16 per cent of Americans felt physician's fees were too high. A 1970 survey showed that figure had climbed to 22 per cent. I suspect it's even higher now. Yet, we have not done a good job of publicizing the fact that while fees rose 70 per cent between 1960 and 1971, the average weekly wage for a manufacturing production worker rose over 90 per cent. We have not publicized the fact that physician's fees have been held to a 2.5 per cent increase during the Nixon freeze, while almost every other group has dramatically increased its charges, for instance, attorneys who have had a 14 per cent increase.

We are working with a more sophisticated, educated populace who demand the personal attention that the image says doctors must provide. Yet apparently, there is a grow-

(Continued on Page 608)

Presented at the Communications Clinic in Birmingham on January 27, 1973 by Duncan Black, Director of Communications, MASA.

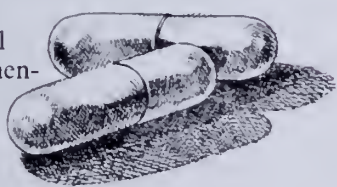
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Before prescribing, please consult complete product information, summary of which follows:

Contraindications: Patients with glaucoma; prostatic hyperplasia and benign bladder neck obstruction; known hypersensitivity to chlordiazepoxide hydrochloride and/or clidinium bromide.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering Librium (chlordiazepoxide hydrochloride) to known addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards. As with all anticholinergic drugs, an inhibiting effect on lactation may occur.

Precautions: In elderly and debilitated, limit dosage to smallest effective amount to preclude development of ataxia, oversedation or confusion (not more than two capsules per day initially; increase gradually as needed and tolerated). Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients. Employ usual precautions

in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: No side effects or manifestations not seen with either compound alone have been reported with Librax. When chlordiazepoxide hydrochloride is used alone, drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally with chlordiazepoxide hydrochloride, making periodic blood counts and liver function tests advisable during protracted therapy. Adverse effects reported with Librax are typical of anticholinergic agents, i.e., dryness of mouth, blurring of vision, urinary hesitancy and constipation. Constipation has occurred most often when Librax therapy is combined with other spasmolytics and/or low residue diets.



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(Continued from Page 605)

ing number of physicians—and their assistants—who believe that a brusque, rude manner will not affect a patient as long as his medical problem receives attention.

Medical care is a one-of-a-kind, one-at-a-time operation, and requires humanism, an indispensable and integral part of patient care. In medicine, it connotes compassion, benevolence, and charity. It implies human understanding, social conscience, and a sympathetic attitude toward those in distress.

More attention must be paid to simple requests: a short conference with the patient's family at the hospital, swift notification of test results, returning patient's telephone calls, etc.

Some physicians, too, must devote some time to streamlining their appointment procedure. Recent surveys show that one-third of all patients wait 30 minutes or more. And while this is being done, some time should be devoted to training assistants in tact,

diplomacy, and common courtesy.

Another problem patients see is lack of effort on the part of some physicians to adequately explain diagnosis and methods of treatment in language a layman can understand.

I think it would be beneficial if every physician in this state availed himself of the questionnaires developed by the American Society of Internal Medicine which give patients an outlet to air their complaints. These forms, similar to those you've seen in leading restaurants and hotels, could tell a physician a great deal about his practice.

Patient relations is public relations and your patients determine what public opinion is going to be. Will we be able to retain our old, true, image? We will if we live up to it.

But if the public ceases to regard doctors as helpful and compassionate, then they will allow the government to succeed in making them salaried technicians.

LET US BE YOUR TRAVEL ARCHITECT

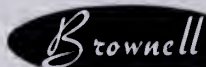
You can build your own house if you wish. The raw materials are available to you. But unless you are an experienced builder, you take a considerable gamble. The house may turn out to cost much more than you figured, and it may not be completely satisfactory.

The raw materials of travel are also available to you: transportation schedules, hotel rates, descriptive material on countries, resorts, guide books, etc. But building a good trip is complex. There are many details connected with each element in travel from selecting the carrier and the hotel to making the sightseeing and other arrangements.

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"The history of science, and in particular the history of medicine...is... the history of man's reactions to the truth, the history of the gradual revelation of truth, the history of the gradual liberation of our minds from darkness and prejudice."

—George Sarton, from "The History of Medicine Versus the History of Art"

Are there significant differences in bioavailability and clinical predictability among drug products?

Opinion

Results of a questionnaire to 7,000 physicians:

44.6%

Agree there is a significant difference

24.9%

Believe there is no difference

30.5%

Had no opinion

Are there significant differences in bioavailability and clinical predictability among drug products?

Teacher of Medicine

Alfred Gilman, Ph.D.
Wm. S. Lasdon
Professor & Chairman
Department of
Pharmacology
Albert Einstein
College of Medicine of
Yeshiva University



I think that there can be a very great distinction between generic drugs and brand name drugs. And that applies to products of original research that have outlived their patent protection as well as to drugs that have long been in the public domain. Let me explain why.

The Importance of the Manufacturing Environment

In terms of formulation, quality control, and the ability to reproduce an essentially identical product, batch after batch, I doubt that many firms are properly equipped to put out a product that is as carefully controlled as the product marketed by a pharmaceutical company with sophisticated research and high quality manufacturing facilities. For example, when a company comes out with its own preparation of a drug that has just lost its patent protection, there is no assurance that the drug it produces will be a therapeutic equivalent. The raw material could be identical and yet bioavailability might vary from complete unavailability to that which is equivalent to the original.

It Isn't Enough to Meet USP and NF Standards

Meeting USP and NF standards is not enough to guarantee therapeutic equivalence. In certain instances, stricter standards must be applied. Right now, the New York Heart Association has a committee that is studying the problem of digoxin equivalent

lency. I am certain that they are going to recommend a bioavailability assay of a particular digoxin. Unless this is done, they will not recommend it for purchase or use in New York City hospitals. It represents too much of a hazard. They have gone so far as to recommend a batch-by-batch certification of bioavailability even though the company has been reproducing and marketing a digoxin product through the years.

The Problem of Controlling Bioavailability of Generics

The FDA does not have the manpower to inspect the quality control capabilities of hundreds of houses specializing in generic products. And I don't think that the average pharmacist is knowledgeable or aware of the quality and bioavailability of the infinite numbers of generic preparations. A recommendation has been made that every time a generic house (or for that matter a large pharmaceutical company) markets an already existing drug for the first time, a modified new drug application should be submitted. The manufacturer would have to show that his compound is the therapeutic equivalent of the standard compound in use, assuming that the standard compound is one that has been available for an extended period—say 15 years. This would be one indication that the control of bioavailability is beginning to get the attention that it deserves.

Clinical Predictability More Important Than Price

Although the question of price has been greatly exaggerated, it is true patients can on occasion save money on generic drugs. But you are not going to dare attempt to save money if it jeopardizes patient's health. Let's turn to the example that has become very prominent in recent years, that of cardiac glycosides. These are probably the most drugs we use with regard to the small difference between a maximally effective dose and a toxic dose. When you are dealing with a drug of this type, the first concern must be clinical predictability. At the time of variations in bioavailability, it would be sheer folly to try to save the patient what might amount to maybe \$10 or \$20 a year. The physician cannot guarantee his patient unless he is sure that the drug prescribed has the positive effect each time the prescription is renewed. This is especially significant when the patient takes the product, not for himself but for the rest of his family.

Maker of Medicine

C. J. Cavallito, Ph.D.
Executive Vice President
Ayerst Laboratories



minimize nonequivalence of drug components produced by different manufacturers. Arguments relate largely to the extent of product inequivalences. Experience over the past six years has uncovered a greater incidence of nonequivalence of products prepared by different manufacturers from generically equivalent substances than many had previously surmised.

Newer Bioavailability Studies Reveal Differences

Bioavailability may be defined as a measure of the rate and amount of absorption of a drug substance from its administered dosage form. For several years pharmaceutical scientists have proposed that bioavailability data on presumably equivalent dosage forms provide the best measure of product equivalence—short of adequate clinical trial. In their continued search for shortcuts to the evaluation of product equivalence, medical and pharmaceutical scientists have increasingly relied upon bioavailability characteristics as reflected by blood levels of a drug after its administration to human subjects.

Leading manufacturers now conduct comparative bioavailability studies on their own product dosage forms after production process changes that would have been considered inconsequential a few years ago. This isn't surprising, since there are so many possible differences in production operations that the opportunities for inequiva-

lent generic and brand name products are numerous—even when the production process begins with identical chemical substances. Moreover, reputable manufacturers are striving to improve *in vitro* control measures, such as dissolution characteristics, which are being related more meaningfully to bioavailability reference data.

As a result of advances in scientific instrumentation and analytical methodology which permit measurements of small quantities of drug substances in the body, our abilities to detect differences in bioavailability and possible therapeutic nonequivalence have appreciably improved.

Product Selection

Based on Patient Response

Improved specifications and standards can better assure the equivalence of drug substances. Manufacturers, compendia and regulatory agencies can all play a part. However, it is the drug product, not the drug substance, that the physician, pharmacist, nurse and patient-customer utilize. How can these indi-

viduals make or influence specific product selections to minimize variations in therapeutic equivalence of multisource drugs? Patients' responses to a drug product provide a basis of experience to aid the physician in his selection of a particular product. The nurse and pharmacist can also help detect patient responses, but ultimate responsibility must remain with the physician.

Reputation of Manufacturer as Basis for Product Selection

The physician, to assure that his patients receive quality health care, must rely upon the capabilities of the reputable pharmaceutical manufacturer who is equipped to develop, prepare and control a quality product of uniform, reliable therapeutic performance. Substitution with purportedly equivalent generic products that are only superficially evaluated by an imitator manufacturer can place the health of the patient secondary to factors of price or convenience for the provider.

Opinion & Dialogue

What is your opinion, doctor?
We would welcome your comments.



The Pharmaceutical Manufacturers Association
1155 Fifteenth Street, N.W., Washington, D.C. 20005

Although equivalence of different preparations of a drug substance may be deduced by certain physical, chemical or biological characteristics, identity is not always assured even though these characteristics may be described in compendia such as the USP, NF or deduced by other specific reference standards. Moreover, even with equivalent drug substances, similar pharmaceutical products can be produced by different manufacturers such that these products are bioequivalent or therapeutically equivalent.

Growing Awareness of Potential for Nonequivalence

As experience increases with drug substances derived from different sources and under different conditions, it should be possible to establish specifications in sufficient detail to minimize the potential for their nonequivalence. However, there is general agreement that product therapeutic equivalence would still not be assured even if one could



MINOCIN® made the difference in just eight days.*

Clinical Data:

Patient: 47-year-old male.

Diagnosis: Severe pyoderma, left hand.

Culture: *Staphylococcus aureus*, coagulase positive and sensitive to MINOCIN.

Temperature: 102° F

Therapy: MINOCIN Minocycline HCl Capsules, 100 mg: 200 mg *stat*, 100 mg every 12 hours. Medication began 9/7/71. By fourth day, temperature was normal and pustular lesions considerably improved. Last dose taken 9/14/71.

Concomitant therapy: None.†



Semisynthetic

MINOCIN®
MINOCYCLINE HCl

Capsules, 100 mg: 2 *stat*, 1 q 12 h.

Indications: For the treatment of susceptible infections; e.g., *E. coli*, *D. pneumoniae*. For full list of approved indications consult labeling.

Contraindications: Hypersensitivity to any tetracycline.

Warnings: The use of tetracyclines during tooth development (last half of pregnancy, infancy and childhood to the age of 8 years) may cause permanent discoloration of the teeth (yellow-gray-brown). This is more common during long-term use but has been observed following repeated short-term courses. Enamel hypoplasia has also been reported. Tetracyclines, therefore, should not be used in this age group unless other drugs are not likely to be effective or are contraindicated. In renal impairment, usual doses may lead to excessive accumulation and liver toxicity. Under such conditions, use lower total doses, and, in prolonged therapy, determine serum levels. Photosensitivity manifested by an exaggerated sunburn reaction has also been observed in some individuals taking tetracyclines. Advise patients apt to be exposed to direct sunlight or ultraviolet light that such reaction can occur, and discontinue treatment at first evidence of skin erythema. Studies to date indicate that photosensitivity does not occur with MINOCIN Minocycline HCl. In patients with significantly impaired renal function, the antianabolic action of tetracycline may cause an increase in BUN, leading to azotemia, hyperphosphatemia, and acidosis. CNS side effects (lightheadedness, dizziness, vertigo) have been reported, may disappear during therapy, and always disappear rapidly when drug is discontinued. Caution patients who experience these symptoms about driving vehicles or using hazardous machinery while taking this drug.

Pregnancy: In animal studies, tetracyclines cross the placenta, are found in fetal tissues, and can have toxic effects on the developing fetus (often related to retardation of skeletal development). Embryotoxicity has been noted in animals treated early in pregnancy. Safety of use during human pregnancy has not been established. **Newborns, infants and children:** All tetracyclines form a stable calcium complex in any bone-forming tissue. Prematures, given oral doses of 25 mg./kg. every 6 hours, demonstrated a decrease

in fibula growth rate, reversible when drug was discontinued. Tetracyclines are present in the milk of lactating women who are taking a drug of this class.

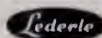
Precautions: Use may result in overgrowth of nonsusceptible organisms, including fungi. If superinfection occurs, institute appropriate therapy. In venereal diseases when coexistent syphilis is suspected, darkfield examination should be done before treatment is started and blood serology repeated monthly for at least four months. Because tetracyclines have been shown to depress plasma prothrombin activity, patients on anticoagulant therapy may require downward adjustment of such dosage. Test for organ system dysfunction (e.g., renal, hepatic and hemopoietic) in long-term use. Treat all Group A beta hemolytic streptococcal infections for at least 10 days. Avoid giving tetracycline in conjunction with penicillin.

Adverse Reaction: GI: (with both oral and parenteral use): anorexia, nausea, vomiting, diarrhea, glossitis, dysphagia, enterocolitis, inflammatory lesions (with monilial overgrowth) in anogenital region. **Skin:** maculopapular and erythematous rashes. Exfoliative dermatitis (uncommon). Photosensitivity is discussed above ("Warnings"). **Renal toxicity:** rise in BUN, dose-related (see "Warnings"). **Hypersensitivity reactions:** urticaria, angioneurotic edema, anaphylaxis, anaphylactoid purpura, pericarditis, exacerbation of systemic lupus erythematosus. In young infants, bulging fontanels have been reported following full therapeutic dosage, disappearing rapidly when drug was discontinued. **Blood:** hemolytic anemia, thrombocytopenia, neutropenia, eosinophilia. **CNS:** (see "Warnings.") When given in high doses, tetracyclines may produce brown-black microscopic discoloration of thyroid glands; no abnormalities of thyroid function studies are known to occur.

NOTE: Concomitant therapy: Antacids containing aluminum, calcium, or magnesium impair absorption; do not give to patients taking oral minocycline. Studies to date indicate that absorption of MINOCIN is not notably influenced by foods and dairy products.

*Indicated in infections due to susceptible organisms. Culture and sensitivity testing recommended. Tetracyclines are not the drugs of choice in the treatment of any staphylococcal infection.

†Case Report, Clinical Investigation Department, Lederle Laboratories.



LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York 10965 12-20 436-2

"Mr. Chairman, Members Of The Subcommittee, I Am Doctor Russell B. Roth . . ."

by

Russell B. Roth, M. D., President-Elect

American Medical Association

Among 26,000 bills introduced into Congress in the past two years over 2,400 were of some medical significance. It is no small task to keep abreast of them. Certainly no individual physician and, for that matter, no individual legislator, can hope to know much about any of them. For the legislators it is a matter of good staff work and political tradeoffs for support. For physicians it has to be good staff work in our Washington Office, careful analysis by our Council on Legislation, and spokespersonship plus politics at the decision-making level.

Obviously the outstanding medical issue of the past two Congresses has been the subject of national health insurance. Four years ago when there was great fanfare as the Committee of 100 for National Health Insurance unveiled its masterplan for the construction of a huge medical bureaucracy, and as Senator Kennedy and Congresswoman Griffiths introduced the Health Security Act, it was adopted by organized labor as its number one priority for passage. It was touted as the idea whose time had come. The question was not whether it would be enacted, but when.

But now, four years later, the Kennedy bill, and the threat it represented, is slowly dissipating. It seems worthwhile asking "why?". The bulk of practicing physicians are obviously happy that the Kennedy bill is nearly defunct—but I am not sure many of them know why. It just didn't take sick and die. It took an immense amount of concentrated effort to establish in Congress and in the country at large that the Kennedy bill was a massive mistake.

The Administration was against it, as was the private health insurance industry, and

the AMA. It required substantial cooperation with many meetings, hours of Congressional testimony, thousands of speeches, and volumes of the written word to carry the message. It was accomplished. It cost AMA dues money to do it. It took many, many man hours of a superb Washington staff, and speeches and testimonies of a wide variety of AMA officers and spokesmen.

It was my personal opportunity—or obligation—to make dozens of speeches across the country, write over a dozen articles for publication, hold innumerable press, radio and television interviews on the subject, and appear in the Senate before the Finance Committee, and its separate Subcommittee on Health chaired by Senator Kennedy, and in the House before the Ways and Means Committee, and Representative Paul Rogers' Subcommittee on Health. Virtually every other officer of the AMA and member of the Board of Trustees, as well as a large number of Council and Committee members were doing likewise. It is nice to feel that we have helped and that our efforts on behalf of the profession as well as the public have been successful.

As individuals, it would seem a hopeless task. But collectively and cooperatively, we can be—as we have been—a positive force in shaping the health care delivery system in this country.

In the final analysis, the AMA's voice can only be as strong as all of us, members of the profession, choose to make it. If we are to increase the AMA's effectiveness, if we are to increase its influence, we need the support of every physician.

Tuberculosis Vaccine May Also Prevent Leukemia

A research study by a Chicago team of scientists indicates that early vaccination with BCG tuberculosis vaccine may also protect children from leukemia.

The study covers almost a quarter of a million infants born in Cook County Hospital, Chicago, over a period of five years ending in 1969.

The unvaccinated group—172,986 infants—recorded six times the incidence of leukemia of the vaccinated group—54,414 infants. The newborns in the latter group were vaccinated with BCG at age of two to three days.

The researchers stop short of drawing firm conclusions, but they point out that the marked statistical difference in the two groups "suggests the value of the BCG vaccine in preventing leukemia in children."

The process involved has been well documented in laboratory animal studies—the

body's immune mechanism is triggered by the vaccine. This mechanism, which involves the body's natural resistance to disease, also can prevent other problems, including leukemia.

The research group points out:

"Recent experimental studies make it reasonable to conclude that the immunogenic mechanism plays a dominant role in host resistance to neoplasia (cancer). It is this mechanism that probably accounts for the suppression of incipient cancer cells which are constantly developing in the human body.

"As long as this immunogenic surveillance is properly functioning, clinical cancer or leukemia is suppressed."

The study group includes Sol R. Rosenthal, M. D., Ph.D., Ray G. Crispen, Ph.D., Margaret G. Thorne, Nancy Piekarski, Nijole Raisys and Philip G. Rettig, J. D.

New Tests For Hepatitis and Lead Poisoning

A test that is "approximately 100 times more sensitive than existing procedures" for detecting hepatitis antigen B in the blood was developed. The test, called radioimmunoassay, or RIA, has been approved by the Food and Drug Administration, which said its general use "should more than double detection of blood plasma or serum units harboring hepatitis virus." Patients who receive transfused blood containing the antigen are in danger of contracting serum hepatitis.

The American Red Cross will begin using the test in January and expects to have it in use at 75 per cent of its blood banks by June 30. The remaining 34 Red Cross centers will put the test into use by the end of 1973.

Red Cross and other blood banks have been using a test devised in 1971 called counter-

electrophoresis, or CEP, that is successful in detecting hepatitis antigen only 20 to 25 per cent of the time. While the new test is more expensive—\$1 a test, as compared to 35 cents for CEP—and requires 24 hours to perform, as against one or two for CEP, RIA is nonetheless expected to be the test of choice against serum hepatitis.

* * *

An easy, reliable and inexpensive blood test for lead poisoning was perfected at New York University by Dr. Sergio Piomelli. Previous tests have shown that 5 per cent of urban children under seven have elevated blood lead levels, which may lead to permanent brain damage. The new test requires only the prick of a finger, and technicians can process as many as 200 a day.

Encounter under the Scanning Electron Microscope



SEM reveals changes in *E. coli* exposed to antibacterial agents

The Scanning Electron Microscope (SEM) is the only instrument which gives 3-dimensional views on a microscopic level. This permits the surface morphology of microorganisms to be observed in

detailed perspective. Changes in surface morphology of *E. coli* exposed to various antimicrobial agents are seen on the following page. An SEM photomicrograph of normal control *E. coli* appears above.



E. coli + sulfamethoxazole



E. coli + tetracycline



E. coli + cephalothin



E. coli + ampicillin

Different modes of antibacterial action — Similar changes in morphology

As part of a series of experiments,¹⁻³ strains of *E. coli* proven susceptible to each antibacterial agent were exposed to 1 MIC of the respective antibacterials for a three-hour period. Included were cell-wall-active drugs, ampicillin and cephalothin; a drug interfering with intracellular protein synthesis, tetracycline; and a chemical agent which acts by interference with para-aminobenzoic acid, sulfamethoxazole.

As seen above, elongation of the bacilli, mid-cell defects and spheroplast-like forms may be appreciated with the SEM technique. These changes in bacterial morphology were similar... regardless of the antibacterial agent used and irrespective of

its mechanism of action.

"At present, the significance of these observations in clinical infection must be considered with caution, but it is hoped that these data will stimulate a reevaluation of present concepts of the nature and role of morphological variants of bacteria exposed to a variety of antibacterial factors."²

It should be noted that no clinical conclusions can be drawn from this study, as it is not always possible to extrapolate *in vitro* data to humans.

References: 1. Klainer, A. S.; Fass, R. J., and Perkins, R. L.: Scientific Exhibit presented at the 25th American Medical Association Clinical Convention, New Orleans, La., Nov. 28-Dec. 1, 1971. 2. Klainer, A. S., and Perkins, R. L.: *Antimicrob. Agents Chemother.*, 1:164, 1972. 3. Klainer, A. S.: Data on file, Hoffmann-La Roche Inc., Nutley, N.J.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Acute, recurrent or chronic nonobstructed urinary tract infections (primarily pyelonephritis, pyelitis and cystitis) due to susceptible organisms. **Note: Carefully coordinate *in vitro* sulfonamide sensitivity tests with bacteriologic and clinical response; add aminobenzoic acid to follow-up culture media.** The increasing frequency of resistant organisms limits the usefulness of antibacterials including sulfonamides, especially in chronic or recurrent urinary tract infections. Measure sulfonamide blood levels as variations may occur; 20 mg/100 ml should be maximum total level.

Contraindications: Sulfonamide hypersensitivity; pregnancy at term and during nursing period; infants less than two months of age.

Warnings: Safety during pregnancy has not been estab-

lished. Sulfonamides should not be used for group A β hemolytic streptococcal infections and will not eradicate prevent sequelae (rheumatic fever, glomerulonephritis) of such infections. Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been reported and early clinical signs (sore throat, fever, pallor, purpura or jaundice) may indicate serious blood disorders. Frequent and urinalysis with microscopic examination are recommended during sulfonamide therapy. Insufficient data on children under six with chronic renal disease.

Precautions: Use cautiously in patients with impaired renal or hepatic function, severe allergy, bronchial asthma; in glucose-6-phosphate dehydrogenase-deficient individuals in whom related hemolysis may occur. Maintain adequate fluid intake to prevent crystalluria and stone formation.

Adverse Reactions: Blood dyscrasias (agranulocytosis,

Encounter in Clinical Practice

Control of primary bacterial offenders

Antibacterial Gantanol® (sulfamethoxazole) controls susceptible strains of *E. coli* and other gram-negative and gram-positive organisms

often implicated in acute nonobstructed pyelonephritis and cystitis.

Prompt antibacterial blood and urine levels

In from 2 to 3 hours after the initial 2-Gm adult dose, antibacterial levels are present in

both the blood and urine.

B.I.D./T.I.D. dosage for around-the-clock coverage

Subsequent 1-Gm doses provide up to 12 hours of antibacterial coverage. More severe u.t.i. may require a q. 8 h. dosage regimen. Either schedule provides coverage during the waking

and sleeping hours—especially important during hours of sleep when normal urinary retention tends to favor bacterial proliferation.

Also effective in nonobstructed chronic and recurrent u.t.i.

It is not uncommon for the elderly and the debilitated to develop chronic and/or recurrent nonobstructed urinary tract infections such as pyelonephritis and cystitis. Such cases often re-

spond satisfactorily to Gantanol. The increasing frequency of resistant organisms is a limitation of usefulness of antibacterial agents including sulfonamides, especially in chronic or recurrent u.t.i.

Your Option: Tablets or Suspension

Either dosage form—the Tablets or the pleasant-tasting, cherry-flavored Suspension—can provide the dependable antibacterial activity necessary to control susceptible nonobstructed cystitis and pyelonephritis. Symptomatic improvement may usually be expected in 24 to 48 hours. The usual precautions with sulfonamide

therapy should be observed, including adequate fluid intake. Gantanol (sulfamethoxazole) is generally well tolerated with relative freedom from complications; the most common side effects are nausea, vomiting and diarrhea. Frequent c.b.c.'s and urinalyses with microscopic examination are recommended.

In nonobstructed cystitis and pyelonephritis due to susceptible organisms

Gantanol®
(sulfamethoxazole)
Basic Therapy

stic anemia, thrombocytopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia); *allergic reactions* (erythema multiforme, skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctivitis and scleral injection, photosensitization, arthralgia and allergic myocarditis); *gastrointestinal reactions* (nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and colitis); *CNS reactions* (headache, peripheral neuritis, meningeal depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia); *miscellaneous reactions* (drug fever, chills, nephrosis with oliguria and anuria, periarteritis nodosa and other phenomenon). Due to certain chemical similarities with other goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of hypothyroidism, diuresis and hypoglycemia as well as thy-

roid malignancies in rats following long-term administration. Cross-sensitivity with these agents may exist.

Dosage: Systemic sulfonamides are contraindicated in infants under 2 months of age (except adjunctively with pyrimethamine in congenital toxoplasmosis).

Usual adult dosage: 2 Gm (4 tabs or teasp.) initially, then 1 Gm b.i.d. or t.i.d. depending on severity of infection.

Usual child's dosage: 0.5 Gm (1 tab or teasp.)/20 lbs of body weight initially, then 0.25 Gm/20 lbs b.i.d. Maximum dose should not exceed 75 mg/kg/24 hrs.

Supplied: Tablets, 0.5 Gm sulfamethoxazole; Suspension, 0.5 Gm sulfamethoxazole/teaspoonful.



Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110

Hunger Control VS. Weight Control



S. K. Fineberg, M.D.

Clinical Assistant Professor of Medicine,
New York Medical College.
Chief, Diabetes and Obesity-Diabetes Clinics,
Metropolitan Hospital, N.Y.C.
Director of Medicine,
Prospect Hospital, Bronx, N.Y.

*The statements by Dr. Fineberg are
intended as medical information, and do not
involve endorsement of any product.*

Although effective appetite suppression is available, "...controlling hunger is not a simple solution to the complex problems of obesity."*

Preludin can lessen hunger. But it should never be used as sole treatment in weight reduction. Fineberg states it well:

"The appropriate and proper use of anorexic drugs in an overall program of weight reduction is to relieve the acute symptoms which are invariably produced by a sharply lowered caloric intake."

"Their use should only be as part of an intensive program which includes patient motivation, instructions in diet, good nutrition and a knowledge of the caloric content of foods."

Preludin is indicated in exogenous obesity as a short-term (a few weeks) adjunct in a regimen of weight reduction based on caloric restriction. For full details, please see the Prescribing Information. It is summarized on the adjacent page.

*Fineberg, S.K.: Presented at Annual Meeting, American Society of Geriatrics, New York City, April 5, 1972.

Preludin® phenmetrazine hydrochloride NF

Preludin®

phenmetrazine
hydrochloride

Endurets®

prolonged-action
tablets

Preludin® phenmetrazine hydrochloride NF

Indications: Preludin is indicated in exogenous obesity as a short-term (a few weeks) adjunct in a regimen of weight reduction based on caloric restriction.

Contraindications: Advanced arteriosclerosis, symptomatic cardiovascular disease, moderate to severe hypertension, hypothyroidism, known hypersensitivity or idiosyncrasy to sympathomimetic amines, and agitated states. Patients with a history of drug abuse. Do not use with other CNS stimulants or MAO inhibitors. Use within 14 days following the administration of monoamine oxidase inhibitors may result in hypertensive crises.

Warnings: Tolerance usually develops within a few weeks. When this occurs, the recommended dosage should not be exceeded in an attempt to increase anorectic effect.

Drug Dependence: Tolerance and extreme psychological dependence have occurred. Patients have been known to increase the dosage of drugs of this type to many times the recommended dosage. Abrupt cessation following prolonged high dosage results in extreme fatigue, mental depression, and reversible changes in the sleep EEG. Manifestations of chronic intoxication include severe dermatoses, marked insomnia, irritability, hyperactivity and personality changes. The most severe manifestation is psychosis, often clinically indistinguishable from schizophrenia.

Caution: patients on the possibility of impaired ability to operate machinery or drive a motor vehicle or engage in other potentially hazardous activity.

Use in Pregnancy: There have been clinical reports of congenital malformation associated with the use of this compound but a causal relationship has not been proved. Until more information is available, Preludin should not be used by women who are or may become pregnant, particularly in the first trimester, unless the physician feels potential benefits outweigh possible risks.

Use in Children: Not recommended for use in children under 12 years of age.

Precautions: Use with caution in patients with mild hypertension. Insulin requirements in diabetes mellitus may be altered. Association with anorectic agents and concomitant dietary restriction. Psychological disturbances may occur in some patients on a restrictive diet with or without concomitant use of anorectic agent.

Adverse Reactions: Overstimulation, restlessness, insomnia, irritability, headache, agitation, flushing, tremor, sweating, dizziness,

ness, dryness of the mouth or unpleasant taste, urticaria, gastrointestinal disturbances, nausea, diarrhea, palpitation, tachycardia, elevation of blood pressure, urinary frequency, dysuria, and changes in libido. Psychotic states at recommended dosage have been reported with related drugs.

Dosage and Administration: One 25 mg. tablet b.i.d. or t.i.d. one hour before meals, or one 50 mg. or 75 mg. Endurets prolonged-action tablet taken daily. Not recommended for children under 12 years of age.

How Supplied: For b.i.d. or t.i.d. administration, pink, square, scored tablets of 25 mg. in bottles of 100 and 1000.

For once-a-day administration, white, round Endurets prolonged-action tablets of 50 mg. in bottles of 100, and pink, round Endurets prolonged-action tablets of 75 mg. in bottles of 100 and 500.

Distributed by:
Boehringer Ingelheim Ltd.
Elmsford, N.Y. 10523

Under license from **Boehringer Ingelheim GmbH** 028-6/72

For complete details, please see the full prescribing information.
(B) 98-146-560-1 (7/72)

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Research milestones:
lobeline, isoproterenol, theophylline, caffeine,
Dulcolax® (bisacodyl), Preludin® (phenmetrazine),
Persantine® (dipyridamole)

Boehringer Ingelheim Ltd.
Elmsford, N.Y. 10523

AMA Conference To Seek Improved Rural Health Care

The 26th National Conference on Rural Health of the American Medical Association will be held March 29-30 in Dallas (Statler-Hilton Hotel).

Theme of the conference will be: "Rural Health—Innovation to Implementation." Conference goals will be four-fold:

- *To study community organization for rural health services.
- *To emphasize coordination of rural development and rural health services.
- *To review some possible solutions for rural health care delivery systems.
- *To study evaluation techniques for rural health services.

Presiding will be Robert E. Reiheld, M. D., of Orrville, Ohio, chairman of the AMA's Council on Rural Health.

A keynote speaker will be Douglas A. Fenderson, Ph.D., of Bethesda, Md., director of the Office of Special Programs of the Bureau of Health Manpower Education of the National Institutes of Health. Dr. Fenderson will speak on "Health Manpower Developments and Rural Health Services."

The first day conference program will be developed around workshops in which participants will discuss aspects of rural health. Workshop themes will be: "Innovative Approaches for Rural Health Services;" "Bringing Rural Communities and Health Professionals Together;" "Community Organization for Rural Health Services;" "Evaluation—Rural Health Needs and Programs;" "Rural Development and Health Services;" "How Can the Health Team Function?;" "Rural Health Systems Serving the Poor."

A symposium will be conducted on the theme of "What Health Professionals Look for in a Rural Practice." Participants will

examine the subject from the viewpoints of the medical student, the physician and the researcher. A profile of rural health care will be presented.

At a dinner session two teen-agers will be honored with award presentations. Gabino Cabanilla, Houma, La., will receive a national 4-H Club health award. Dennis Rainey, Henrietta, Tex., will receive the Farm Safety Award of the Future Farmers of America.

Additional workshops on the second conference day will study areas such as: "Innovative Approaches for Rural Emergency Medical Services;" "Medical Students—Motivation for Rural Practice;" "Community Involvement in Area-Wide Planning;" "Rural Health Research by Land-Grant Universities;" "Rural Development and Health Education;" "Use of the Health Team in Sparsely Populated Areas;" "Health Services for Rural Minority Groups."

A panel headed by Julian C. Lentz, Jr., M. D., of Maryville, Tenn., vice chairman of the AMA Council, will discuss the National Health Service Corps—an enterprise of the federal government to recruit physicians and other health professionals for services in communities in need of more health care. The program is being given full assistance by the AMA.

Preceding the conference (on March 28) a one-day seminar for extension specialists in health education and related fields will be held. Seminar theme will be "Health Education—An Integral Part of the Extension Program."

Seminar objectives will be:

- *To assess the development of extension consumer health education pilot programs.

(Continued on Page 623)



Placidyl®
(ETHCHLORVYNOL)

Summary

Indications—Placidyl (ethchlorvynol) is indicated for short-term hypnotic therapy in the management of insomnia.

Contraindications—Drug hypersensitivity and porphyria.

Warnings—Not recommended during the first and second trimester of pregnancy. Caution patients against possible combined exaggerated effects with barbiturates, tranquilizers or other CNS depressants. Exaggerated effects might result in impairment of vision, paralysis of accommodation and prolonged hypnosis. Caution patients concerning operation of a motor vehicle, operating machinery, or hazardous operations requiring alertness after taking the drug. Administer with caution to patients with suicidal tendencies and do not prescribe large quantities of the drug. Adjustment of dosage of oral anticoagulants might be necessary when beginning ethchlorvynol therapy, during therapy, or after stopping therapy. This drug is not recommended for use in children. PLACIDYL HAS THE POTENTIAL FOR THE DEVELOPMENT OF PSYCHOLOGICAL AND PHYSICAL DEPENDENCY. IN SOME INSTANCES OF SEVERE WITHDRAWAL SYMPTOMS, INCLUDING CONVULSIONS AND DELIRIUM, CLINICALLY SIMILAR TO THOSE SEEN WITH BARBITURATES, HAVE BEEN REPORTED IN PATIENTS TAKING REGULAR DOSES AS LOW AS 100 MG. PER DAY OVER A PERIOD OF SEVERAL WEEKS WHEN THE DRUG WAS SUDDENLY DISCONTINUED. PROLONGED ADMINISTRATION OF PLACIDYL IS NOT RECOMMENDED. Addiction-prone patients or those who are likely to increase dosage of the drug on their own initiative should be observed for evidence of signs or symptoms which may indicate possible early withdrawal or abstinence symptoms. Signs and symptoms associated with withdrawal and abstinence include: unsteady gait, anxiety, tremor, ataxia, slurring of speech, loss of appetite, perceptual distortions, irritability, confusion and delirium. Other less well defined withdrawal symptoms, not necessarily due to withdrawal and abstinence, may include anorexia, nausea, vomiting, weakness, dizziness, sweating, muscle twitching and weight loss. Abrupt discontinuation of Placidyl following prolonged overdosage may result in convulsions and delirium.

Precautions—Toxic amblyopia has been reported following long-term continuous use of ethchlorvynol. Permanent visual defects have been observed, although amblyopia has improved after discontinuation of the drug. Drug dosage should be limited in elderly and debilitated patients to the smallest effective amount. If pain is present, this drug should only be given if insomnia persists after being controlled with analgesics. Caution is advised in prescribing the drug for patients who are being treated with either MAO inhibitors or anti-depressants. Transient delirium has been reported with combination of Placidyl and amitriptyline. Dosage should be reduced if prescribed for patients receiving MAO inhibitors or antidepressants. Caution should be exercised in patients with impaired hepatic or renal function. Patients should be monitored for unpredictable effects of barbiturates or alcohol who exhibit excitement and release of inhibitions. Association with such agents, may also lead to this way to Placidyl. Rarely, patients may have symptoms suggestive of an unusual sensitivity to the drug; such as prolonged hypnosis, muscular weakness, excitement, hysteria, hypotension without marked hypotension. Transient ataxia or ataxia may occur.

Reactions—Hypotension, nausea or vomiting, gastric upset, aftertaste, blurring of vision, drowsiness, facial numbness, and allergic reaction manifested by urticaria have been reported following administration. Mild "hangover" and symptoms of mild excitation have occurred in some patients. There have been rare reports of cholestatic jaundice occurring in patients taking ethchlorvynol. Cases of thrombocytopenia have been reported in patients receiving ethchlorvynol. 302430R



Give us her nights..

Prescribe Placidyl. Chances are, we'll give her a good night's sleep.

Insomnia is often associated with emotional disturbance. Emotional problems might be the cause . . . or the effect. In time that can be determined. But tonight, one fact is painfully clear: she needs sleep.

When sleep is synonymous with therapy, remember . . . Placidyl is synonymous with sleep. It has been for over 17 years.

If time is the criterion to inspire your confidence... you can rest assured with Placidyl.

Prescribed by physicians for over 17 years.

Placidyl®
(ETHCHLORVYNOL CAPSULES, 500 or 750 mg.)



The Rx that says "Relax"



BUTISOL Sodium provides highly predictable sedative effects: minor dosage adjustments are usually all that's needed to produce the desired degree of sedation. (With 3 dosage forms and 4 strengths to make adjustments easy.)

BUTISOL Sodium offers prompt, smooth, relatively non-cumulative action: begins to work within 30 minutes...yet, because of its intermediate rate of metabolism, generally has neither a "roller-coaster" nor a "hangover" effect.

BUTISOL Sodium is remarkably well tolerated: a 30-year safety record assures you that there is little likelihood of unexpected reactions.

BUTISOL Sodium saves your patients money: costs less than half as much as most commonly prescribed sedative tranquilizers.*

These are four good reasons for prescribing BUTISOL Sodium for the many patients who need to have the pace set just a little slower. Its gentle daytime sedative action is often all that's needed to help the usually well-adjusted patient cope with temporary stress.

*Based on surveys of average daily prescription costs.

Butisol SODIUM
(SODIUM BUTABARBITAL)

Contraindications: Porphyria, sensitivity to barbiturates, or susceptibility to dependence on sedative-hypnotics. **Warning:** May be habit forming.

Precautions: Exercise caution in: moderate to severe hepatic disease; withdrawal in drug dependence or the taking of excessive doses over a long period, to avoid withdrawal symptoms, elderly or debilitated patients, to avoid possible marked excitement or depression; use with alcohol or other CNS depressants, because of combined effects. **Adverse Reactions:** Drowsiness; daytime sedative dose levels, skin rashes, "hangover" and gastrointestinal disturbances are seldom seen. **Usual Adult Dosage:** For daytime sedation, 15 mg. to 30 mg. t.i.d. or q.i.d. For hypnosis, 50 mg. to 100 mg. **Available as** Tablets, 15 mg., 30 mg., 50 mg., 100 mg.; Elixir, 30 mg. per 5 cc. (alcohol 7%); BUTICAPS® (Capsules BUTISOL SODIUM (sodium butabarbital)) 15 mg., 30 mg., 50 mg., 100 mg.

McNEIL

McNeil Laboratories, Inc., Fort Washington, Pa. 1903

(Continued from Page 620)

*To gain an understanding of a viable health education program for the public.

*To review recent national developments of concern to those working in the field of extension health education.

Opening speaker for the seminar will be Mrs. Carol D'Onofrio, Ph.D., acting chairman of the health education program for the University of California School of Public Health, Berkeley, Calif. Her topic will be "Changing Health Behavior Through Education."

Health And Welfare Legislation

H. R. 1, the Social Security Amendments for 1972, included sweeping changes in the benefits provided by Medicare and Medicaid. Among the changes affecting medicine were:

...Extension of Medicare coverage to 1.7 million disabled persons currently covered by Social Security and Railroad Retirement programs.

...Medicare coverage for insured patients who need kidney dialysis machines or kidney transplants. This is one of two provisions in the bill extending Medicare to individuals under age 65.

...The option of receiving treatment from a health maintenance organization for individuals eligible for Medicare. Participating HMOs would have to meet prescribed standards.

...Professional Standards Review Organizations to review quality and appropriateness of locally provided health care paid for by Medicare and Medicaid.

...Automatic enrollment in Part B of Medicare for persons eligible for Part A hospital coverage, unless they do not wish to participate.

...Repeal of the provision that all states must provide comprehensive Medicaid services to their poor by 1977.

...Permission for states to cut back Medicaid programs.

...Individuals able to pay monthly Medicaid premiums could be required to do so.

...Guaranteed income of \$130 a month for an individual and \$195 for a couple (more if on Social Security) to the aged, blind, disabled.

Other important health legislation included:

...The National Cancer Act, which authorized spending \$1.6 billion over the next three years for cancer research and treatment.

...The National Heart, Blood Vessel, Lung and Blood Act. Authorized \$1.4 billion for accelerated research, development, training, and public education in the field of heart, lung and blood disease.

...The Veterans' Administration Medical School Assistance and Health Manpower Training Act of 1972. Provides for establishment of eight state medical schools to be operated in conjunction with VA hospitals.

...Emergency Health Personnel Act Amendments. A one-year extension of the program placing doctors, dentists and allied health personnel in underserved areas.

...National Sickle Cell Anemia Prevention Act. Establishes national program for research and treatment of sickle cell disease.

Pending at and under consideration during this session are national health insurance bills and consideration of federal aid for development and operation of health maintenance organizations.

New Vaccines Being Tested

Promising clinical tests are now being conducted in the United States and France with a vaccine against infectious mononucleosis. Although the vaccine, which is prepared from the red blood cells of cattle and sheep, produced anti-IM antibodies in all of the 250 subjects tested, Dr. Paul Springer of Northwestern University School of Medicine, who headed the research, says that determining whether the vaccine offers definite protection against IM will take about three years.

Clinical trials also began on a new influenza vaccine that is a temperature-resistant mutant combining the asian flu virus of 1965 with the Hong Kong/1968 virus. The new strain resulted in only mild symptoms and protected volunteers against the Hong Kong virus.

The Continuing War Against Venereal Disease

Venereal disease remains a major health problem, second in number of cases only to the common cold. According to figures released by the U. S. Public Health Service, gonorrhea has increased 15 per cent since last year, an epidemic year, and the number of cases of syphilis is the highest in 22 years. In spite of a \$16 million federal effort to find and treat the disease, primarily in asymptomatic women, there are no signs as yet that the wave is receding. The recent discovery that men may also be asymptomatic carriers of gonorrhea has added to the problem of detection and cure.

When they (English proverb, c. 1559) said "the nearer the bone, the sweeter the meat," they were talking of turkey, not chicken.

—A. E. Reynolds, Mobile.

Rondomycin (methacycline HCl)

CONTRAINDICATIONS: Hypersensitivity to any of the tetracyclines.

WARNINGS: Tetracycline usage during tooth development (last half of pregnancy to eight years) may cause permanent tooth discoloration (yellow-gray-brown), which is more common during long-term use but has occurred after repeated short-term courses. Enamel hypoplasia has also been reported. Tetracyclines should not be used in this age group unless other drugs are not likely to be effective or are contraindicated. Usage in pregnancy. (See above WARNINGS about use during tooth development.)

Animal studies indicate that tetracyclines cross the placenta and can be toxic to the developing fetus (often related to retardation of skeletal development). Embryotoxicity has also been noted in animals treated early in pregnancy.

Usage in newborns, infants, and children. (See above WARNINGS about use during tooth development.)

All tetracyclines form a stable calcium complex in any bone-forming tissue. A decrease in fibula growth rate observed in premature given oral tetracycline 25 mg/kg every 6 hours was reversible when drug was discontinued.

Tetracyclines are present in milk of lactating women taking tetracyclines.

To avoid excess systemic accumulation and liver toxicity in patients with impaired renal function, reduce usual total dosage and, if therapy is prolonged, consider serum level determinations of drug. The antibiologic action of tetracyclines may increase BUN. While not a problem in normal renal function, in patients with significantly impaired function, higher tetracycline serum levels may lead to azotemia, hyperphosphatemia, and acidosis.

Photosensitivity manifested by exaggerated sunburn reaction has occurred with tetracyclines. Patients apt to be exposed to direct sunlight or ultraviolet light should be so advised, and treatment should be discontinued at first evidence of skin erythema.

PRECAUTIONS: If superinfection occurs due to overgrowth of nonsusceptible organisms, including fungi, discontinue antibiotic and start appropriate therapy.

In venereal diseases, when coexistent syphilis is suspected, perform darkfield examination before therapy, and serologically test for syphilis monthly for at least four months.

Tetracyclines have been shown to depress plasma prothrombin activity; patients on anticoagulant therapy may require downward adjustment of their anticoagulant dosage.

In long-term therapy, perform periodic organ system evaluations (including blood, renal, hepatic).

Treat all Group A beta-hemolytic streptococcal infections for at least 10 days. Since bacteriostatic drugs may interfere with the bactericidal action of penicillin, avoid giving tetracycline with penicillin.

ADVERSE REACTIONS: Gastrointestinal (oral and parenteral forms): anorexia, nausea, vomiting, diarrhea, glossitis, dysphagia, enterocolitis inflammatory lesions (with monilial overgrowth) in the anogenital region.

Skin: maculopapular and erythematous rashes; exfoliative dermatitis (uncommon). Photosensitivity is discussed above (See WARNINGS).

Renal toxicity: rise in BUN, apparently dose related (See WARNINGS).

Hypersensitivity: urticaria, angioneurotic edema, anaphylaxis, anaphylactoid purpura, pericarditis, exacerbation of systemic lupus erythematosus.

Bulging fontanels, reported in young infants after full therapeutic dosage, have disappeared rapidly when drug was discontinued.

Blood: hemolytic anemia, thrombocytopenia, neutropenia, eosinophilia.

Over prolonged periods, tetracyclines have been reported to produce brown-black microscopic discoloration of thyroid glands; no abnormalities of thyroid function studies are known to occur.

USUAL DOSAGE: Adults—600 mg daily, divided into two or four equally spaced doses. More severe infections: an initial dose of 300 mg followed by 150 mg every six hours or 300 mg every 12 hours. Gonorrhea: In uncomplicated gonorrhea, when penicillin is contraindicated, "Rondomycin" (methacycline HCl) may be used for treating both males and females in the following clinical dosage schedule: 900 mg initially, followed by 300 mg q. i. d. for a total of 5.4 grams.

For treatment of syphilis, when penicillin is contraindicated, a total of 18 to 24 grams of "Rondomycin" (methacycline HCl) in equally divided doses over a period of 10-15 days should be given. Close follow-up, including laboratory tests, is recommended.

Eaton Agent pneumonia: 900 mg daily for six days.

Children—3 to 6 mg/lb/day divided into two to four equally spaced doses.

Therapy should be continued for at least 24-48 hours after symptoms and fever have subsided.

Concomitant therapy: Antacids containing aluminum, calcium or magnesium impair absorption and are contraindicated. Food and some dairy products also interfere. Give drug one hour before or two hours after meals. Pediatric oral dosage forms should not be given with milk formulas and should be given at least one hour prior to feeding.

In patients with renal impairment (see WARNINGS), total dosage should be decreased by reducing recommended individual doses or by extending time intervals between doses.

In streptococcal infections, a therapeutic dose should be given for at least 10 days.

SUPPLIED: "Rondomycin" (methacycline HCl) 150 mg and 300 mg capsules, syrup containing 75 mg/5 cc methacycline HCl.

Before prescribing, consult package circular or latest PDR information.

Rev. 12/71



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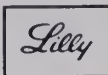
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The A, B, C's of Mechanical Ventilation

Part II

The Dilution Mixing Process

D. S. Tysinger, Jr. M.D.

Dothan, Alabama

Part I discussed air flow through a tube and all the things that effect it. This part will discuss the second phase of mechanical ventilation. Once air flow can be produced mechanically, the second question is how much and for how long?

Since the lungs do not empty completely, some air remains in the lungs after each breath. This air is *The Functional Residual Capacity*. The values for nitrogen go up to 81 per cent, the oxygen partial pressure averages 70 to 100 mmHg., 9 to 13 per cent and there is now 100 per cent humidity, 47 mmHg. pressure or 6.2 per cent. Carbon dioxide is present at the average 40 mmHg. or 5.3 per cent. This air is different than the ambient air around the patient.

To the functional residual capacity periodically there is added, by breathing, a quantity of air known as tidal volume. This is done intermittently. The ambient air has 20 per cent oxygen and enriches the mixture when combined. It has no carbon dioxide and thus dilutes the carbon dioxide. While this is being done the oxygen is being removed and carbon dioxide is being added. Following a mixing period the tidal volume is removed with its new concentrations of substance including 100 per cent humidity at body temperature. Then, a new and fresh breath is taken and the process is repeated.

The partial pressure of oxygen in the lungs determines the per cent saturation of the hemoglobin. High partial pressures cause more pickup of oxygen by each unit of hemoglobin passing through than low partial pressures.

The dilution mixing procedure just described needs to be understood. How does it work? How does the physician with inhalation therapy change it?

As an illustration, imagine a bucket. In this bucket is 2,000 ml air at alveolar partial pressures and to this is added, equilibrated and then removed, 500 ml air. This is repeated 15 times each minute. The bucket absorbs 525 ml oxygen per minute. The concentration of oxygen is constantly being decreased by the bucket and constantly being increased by the addition of the fresh mixing supply of 500 ml air.

Five-hundred ml of air with 20 per cent oxygen would contain 100 ml of oxygen. Two-thousand ml of air with 13 per cent oxygen would be 260 ml. When the 500 ml is added to the 2,000 ml, now 2,500 ml of air is in the container. One-hundred ml plus 260 ml is now 360 ml oxygen, this would be 14.4 per cent oxygen. If the bucket is removing 525 ml/min of oxygen, this would be $525 \div 15 = 35$ ml per mixing. So for mixing

$360 - 35 = 325$ ml oxygen left when it is time to remove the 500 ml. Now, the oxygen level is back to the 13 per cent that was started with. The 500 ml removed will contain now 65 ml oxygen. At this point the process is repeated.

Suppose instead of 35 ml of oxygen per mixing being removed, 70 ml per mixture is being removed. Starting with the same $360 \text{ ml} - 70 \text{ ml} = 290 \text{ ml}$ in the 2,500 ml, the concentration is now reduced to 11.6 per cent, one-fifth is removed as 500 ml is removed leaving 232 ml oxygen in the 2,000 ml of air. The next 500 ml air with 100 ml oxygen, now is only 332 ml oxygen in 2,500 ml air. This is 13.3 per cent instead of the 14.4 per cent as before. Now with the 70 ml oxygen removed, the amount of oxygen in the alveolar air is reduced to 262 ml or 10.5 per cent. When the 52 ml is removed this time there is only 21 ml oxygen in the 2,000 ml air. The next 500 ml air with 100 ml oxygen amounts to only 310 ml oxygen in the 2,500 ml air or 12.4 per cent. Now after 70 ml is removed, it drops to 9.6 per cent. This continues to go slowly downhill.

This situation can be corrected by: (1) doubling the mixing volume, (2) doubling the rate to cause the same ratio of 35 ml removed for each breath as before, (3) increasing the partial pressure of oxygen in the mixing volume (4) a combination of the three.

Applying the first method would be to double the mixing volume of 500 ml to 1,000 ml oxygen at 20 per cent would contain 200 ml oxygen now mixing 200 ml with 260 ml 460 ml in 3,000 ml air or 15.3 per cent. Now with 70 ml oxygen removed 390 ml is left or 13 per cent of 3,000 ml. Removal of 130 ml with the 1,000 ml air would leave 260 ml in the 2,000 ml left.

What about increasing the alveolar air in the bucket? Without repeating the basic mathematics completely, it is found that with the same tidal volume of 500 ml air with 100 ml oxygen, that with double oxygen

removal by the bucket increasing volume buffers but does not correct. What happens with 70 ml uptake of oxygen and with 500 ml mixing volume now with a 4,000 ml new bucket volume? Here, 4,000 ml would contain 520 ml oxygen. Add the 500 ml air and there is 620 ml oxygen or 13.55 per cent instead of 14.47 per cent. Following removal of 70 ml oxygen by the bucket, it drops to 12.2 per cent instead of 13 per cent. This will continue downhill but slower.

If the mixing volume is put into the bucket volume with 20 per cent oxygen in the one and 13 per cent oxygen in the other, and if 35 ml oxygen is being removed there is a stable situation. If the bucket volume is doubled or tripled, as long as the mixing volume is the same and the 35 ml is being removed it will remain stable. With the larger bucket volumes the only difference is a reduced per cent concentration fluctuation which is a reduced partial pressure fluctuation. If the bucket volume is reduced by one-half, the same is still so. Here per cent concentrations (partial pressures) fluctuate more with mixing and taking away. The per cent concentration goes higher with each mixing and comes back to the same value as with the original and double volumes.

Thus, if the functional residual volume is small, normal, or much increased, it will take the same tidal volume to supply oxygen demands. This can be done by increasing rate or volume per breath. (Dead space should be understood. Its affect further complicates increase in rate.)

The per cent concentration, however, is the thing that determines transfer of unit volume from alveolus to hemoglobin molecule. With the small volume fluctuations of 13 per cent to 15 per cent occurred, which would give partial pressures of 100 mmHg. to 114 mmHg. The large functional residual volume essentially remained 13 to 13.3 per cent. Thus, over the same period of time the small functional residual volume is more

effective if only slightly so. To continue in this vein it makes no difference what the volume in the bucket is as long as 500 ml is being added fifteen times per minute and 35 ml is being removed. The end mixing and absorption concentration will be 13 per cent. Five-hundred ml 13 per cent oxygen will contain 65 ml oxygen whether it is taken out of the 1,000 or 5,000 ml.

If the same amount is put in as is used up, it will stay stable. If more is put in than is used up, it will increase. If less is put in than used up, it will decrease. It will increase and decrease much slower with large volumes in the bucket than with small volumes.

To change the concentration in the bucket rapidly, reduce the bucket volume.

If there is increased utilization of oxygen in the bucket then there are several ways of compensating:

1. increase tidal volume
2. increase rate
3. increase inspiratory concentrations
4. a combination of the above

If getting oxygen in were the only problem, ventilation would be much easier. The individual also puts out CO_2 . The CO_2 must be kept at a much more precise level to maintain pH. What happens to the CO_2 with the examples just described?

For every 250 ml oxygen uptake the body usually puts out 200 ml CO_2 . Thus, if CO_2 of 40 mmHg or 5.3 per cent is present and the patient is utilizing 250 ml oxygen per minute he will be putting 200 ml CO_2 back. Two-thousand ml bucket volume at 5.3 per cent CO_2 would contain 106 ml CO_2 . Five-hundred ml air mixing with no CO_2 would dilute this to 4.2 per cent or 21.5 ml per 500 ml. At 15 times per minute with a 525 ml oxygen uptake this would be 420 ml CO_2 /min and this would be 28 ml added per breath. Twenty-eight ml CO_2 added to the 106 ml CO_2 raises the volume to 134 ml CO_2

and now in the 2,500 ml volume the per cent concentration is 5.36 per cent. In removal of carbon dioxide the need for balance is more precise and necessary than getting oxygen in. If the tidal volume is increased, CO_2 is washed out. If tidal volume is decreased, CO_2 is retained.

In the washout of CO_2 the balance is more meticulous. Here, volume removed is directly dependent on functional residual capacity per cent concentration. Five-hundred ml air with CO_2 at 3 per cent contains less CO_2 than 500 ml with CO_2 at 8 per cent. This amounts to 15 ml at 3 per cent and 40 ml at 8 per cent. Not much per cent change but large ml volume difference.

As long as the volume of CO_2 (the per cent concentration) is the same 500 ml will remove the same volume of CO_2 . If CO_2 is building up and removal is desired then putting 28 ml CO_2 into 5.3 per cent at 1,000 ml will increase per cent concentration more than putting 28 ml into 5,000 ml 5.3 per cent. At 1,000 ml 5.3 per cent 53 ml $\text{CO}_2 + 28$ ml $\text{CO}_2 = 81$ ml CO_2 or 7.88 per cent. For 5,000 ml 265 ml $\text{CO}_2 + 28$ ml $\text{CO}_2 = 293$ ml CO_2 or 5.8 per cent. Five-hundred ml 7.88 per cent would contain 40.5 ml whereas 500 ml 5.8 per cent would contain only 29.7 ml. The tidal volume is more effective at removal of CO_2 if a small functional residual is used than if a large functional residual is used.

The individual who has an increased oxygen consumption also has an increased CO_2 production. Both must be maintained within normal limits or mechanical ventilation is a failure. To try to maintain oxygen levels and forgetting carbon dioxide and pH is just as stupid as maintaining carbon dioxide and pH and forgetting oxygenation.

The techniques for removal of CO_2 are more limited than the methods of increasing PO_2 .

In maintaining oxygen concentrations increases in tidal volume, rate and inspiratory concentration will deliver more per unit of

time. In removing CO_2 functional residual capacity may be increased or decreased to some extent so as to make tidal volume more effective. In making these changes, however, carbon dioxide must not be allowed to accumulate or must not be washed out. A constant 5.3 per cent is mandatory.

The individual breathing by his own physiological controls, varies tidal volume rate and functional residual so that oxygen and carbon dioxide levels remain fairly stable. He has sensors for oxygen, carbon dioxide and pH. Each has its effect on the depth and rate of breathing, and thus the volume inflation of the lungs. Increased CO_2 levels will tend to lower FRC if oxygen saturations are normal. Low CO_2 levels will tend to increase FRC. This regulation is usually through bronchospasm with increased resistance to emptying and thus increased FRC. This sensitive mechanism varies with each breath.

The mechanical ventilator should maintain, support and assist the normal physiological control mechanisms. No machine is even near replacing the body's normal control mechanisms. When the body is unable to respond to the driving stimuli to maintain volume exchange, thus control of PO_2 , PCO_2 and pH, then mechanical assistance is indicated and needed. When the body's control mechanism has ceased to function then and only then should mechanical ventilation attempt to take over. When mechanical ventilation takes over the aim is to maintain pH, PO_2 and PCO_2 . Measuring volumes put in or taken out tells one very little about how well the patient is doing. Only blood gases can do this.

In some instances it may not be possible to maintain all perimeters. Where this is so ventilate volume-wise to maintain pH by controlling CO_2 . When this is being done then adjust inspiratory oxygen concentrations to maintain 13 per cent PO_2 (100 mmHg). Thus, the A,B,C's of mechanical ventilation:

- A. Match trachea flow rates using the lowest pressure possible to cause volume exchange.
- B. Ventilate the volume necessary to maintain pH 7.35 to 7.45 by controlling CO_2 .
- C. If after this is done, oxygen concentrations are low, then increase inspiratory oxygen concentrations to bring PO_2 up to 100 mmHg.

Flow rates through the trachea should be matched and if not, should not be increased more than one and one-half times normal if medication and moisture are to be delivered.

Ventilation is much easier to accomplish than medication delivery (inhalation therapy is particulate delivery).

High pressures and/or high flow rates will not deliver medication or 100 per cent humidity beyond the lung bottleneck.

Functional residual capacity can be controlled to some extent. End expiratory positive pressure increases FRC as does obstructive disease. It is man-made obstructive disease. Why use it? Expiratory vacuum (negative pressure) reduces FRC and makes a smaller tidal volume more effective. Since volume is reduced and a vacuum (negative pressure) is produced in the alveolus at the beginning inspiration, then the reduction of FRC is delivered as part of the tidal volume without requiring pressure as the chest cage and lungs return to resting position and alveolar pressure returns to zero. Since at this point pressure is zero, and since one-half to two-thirds of the tidal volume has already been delivered less flow volume and pressure is required during inspiration.

As to the danger of a vacuum (negative pressure), the individual breathing produces much more alveolar vacuum than that used to ventilate. It is impossible to produce a greater vacuum (negative pressure) in the alveolus and bronchial tubes than occurs

interstitially because the interstitial area is made more negative by the collapsing force of the alveolus and bronchial structures pulling against the chest cage and diaphragm.

As for trapping, the negative interstitial tissue pressures keep tubes open when vacuums (negative pressures) of this degree are used intermittently and this is whether the patient is apneic or not. Trapping occurs when high positive pressures are used. Here, tangential pressures like those developed with a cough do develop neutralizing interstitial vacuum (negative pressure) causing collapse. Helping trap is the Bernoulli effect of tubular flow at the high flow rates going by the obstructed orifices that these high pressures produce.

Thus, "intermittent positive-vacuum" (negative) breathing does reduce FRC, does reduce tidal volume needed and does increase ventilatory efficiency. End expiratory positive pressures increase FRC, increase tidal volume necessary, increase trapping, and can be made to work but not without pressures and flow rates that are extremely detrimental to the lung physiology.

Physiologically, there are three types of mechanical ventilation in general use. The *first* is the high fixed flow rate machines which are pressure-cycled. *Second* are the so-called volume-cycled machines. These are actually fixed volume, timed-cycled machines where pressure is not being controlled. (This type machine in many instances does have a nebulizer run separately at 6 to 10 l/min. with 50 PSI pressure to drive it so that when it is running continuously 100 to 166 2/3 ml/sec is being added in addition to the present volume.) The *third* type is the flow rate controllable, pressure-cycled machine.

The first machines to really be sold and utilized were the high fixed flow rate pressure-cycled machines. They ran at 45 to 50 l/min flow. (This is 50 PSI line pressure

driven flow.) Venturi intrainment increased flows to 100 to 120 l/min. At 50 l/min this amounts to 833 1/3 ml/sec. Normal trachea flows are 6 to 10 l/min. in one-third to one-half of the minute or 200 to 333 2/3 ml/sec. The trachea design is for low flow and because of its lower end having 100 branches (tertiary bronchi) with great increase in air-wall interphase here is great resistance to high flow rates. When tracheal flow doubles maximum tracheal turbulence has been reached or passed. This means that maximum tubular turbulence is developed at flow rates of 400 ml/sec. High flow rates of 838 1/2 ml/sec causes severe turbulence in the trachea. This machine can ventilate increase PO₂ and reduce PCO₂, however, it does its very unphysiologically. This type machine cannot and does not deliver particulate material (inhalation therapy solutions) beyond the tubular area, (trachea, primary, secondary and tertiary bronchi). It produces severe turbulence in the trachea area. It should be restricted to ventilatory problems only where medications and humidity are not a problem.

Because of the extreme popularity of these machines and ignorance of their users, the high fixed flow rate pressure-cycled machines were used in and obtained poor results in the apneic patient. Because of this the volume limited, time-cycled (so-called "volume-cycled") machines became popular. These machines work on the piston principle. The operator fixes a rate at which a piston will move through a given volume. The rate at which the volume flows is the time to deliver the volume through the tubes. As a result the relentless piston produces enough compression of gas to produce sufficient pressure to deliver the remainder of the gas volume after compression in the time of piston movement on the compression stroke. This machine then finds the flow rate necessary and produces the pressure necessary to cause the volume not used up in compression to be delivered within the time limit of the piston revolution.

There is no doubt that this is a much superior machine to the high fixed flow pressure-cycled machine. The drawbacks are that really the only place this type machine should be used is in the apneic patient. The individual breathing on his own fluctuates each breath in volume and delivery rate. The very set volume delivery gives him too much on one breath and too little on the next. The machine is not capable of making this change. If it were it would not even be a volume machine. Thus, it makes the patient uncomfortable and causes poor cooperation. These machines are hard to humidify and are not effective medicators. Most manufactures have tried to supply these lacks with side arm nebulizers (the futility of side arm nebulizers has been adequately discussed in other publications), side arm nebulizers are run at 6 to 10 l/min and are run separately from and not included in the preset volume. Thus, volume-cycled machines are not really volume-cycled machines if there is a separate flow through a nebulizer into the line flow. The high peak flows and increased transpulmonary pressures some misinformed people speak of braggingly, are only signs of increased airway turbulence that is undesirable and not wanted. In using this machine to cause improvement in and maintenance of pH, PO_2 and PCO_2 , very frequent blood gas checks should be obtained. This is to prevent alveolar hypoventilation which is so common with the semifixed so-called volume-cycled machines.

The other type machine is the flow rate controlled, pressure-cycled machine. Here, flow rate and pressure are controlled separately. Flow rate can be set to the patient's

trachea flow and the pressure delivery of this flow can be set and the patient can control the time, thus volume. Turbulent obstruction in the trachea can be prevented so that particulate material can be delivered into the lungs beyond the trachea. In the apneic patient since trachea flow is matched, less pressure is required to ventilate. All that has to be added over the pressure to cause tracheal flow is the usual alveolar 5cmH₂O subambient pressure and the pressure necessary to push the chest cage out. This is the most physiological of the three types of ventilators. It is useful for both ventilating and medicating the patient, apneic or not.

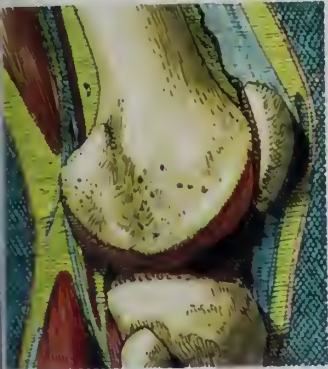
Not all patients can be ventilated. The physician and therapist must realize this. If the physician and therapist understand the A,B,C's of mechanical ventilation, they can ventilate the patient easier and safest with a flow rate controlled, pressure-cycled machine that will produce an effective vacuum phase. If he cannot ventilate a patient with this machine, the patient has two strikes against him from the start.

There is only one pressure and one flow rate for one period of time that will ventilate a specific patient at a particular time. Any equipment that will produce that specific pressure and that specific flow rate for that specific time will ventilate that patient equally well. Equipment that cannot be adjusted to this flow rate and pressure for this period of time, will not ventilate well or at all. It is the job of the physician and therapist to learn to produce these needs for their patients.

WHEN **FLU** HITS AND HURTS

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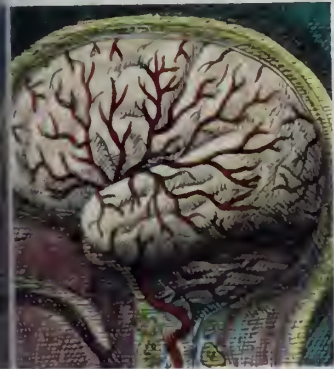
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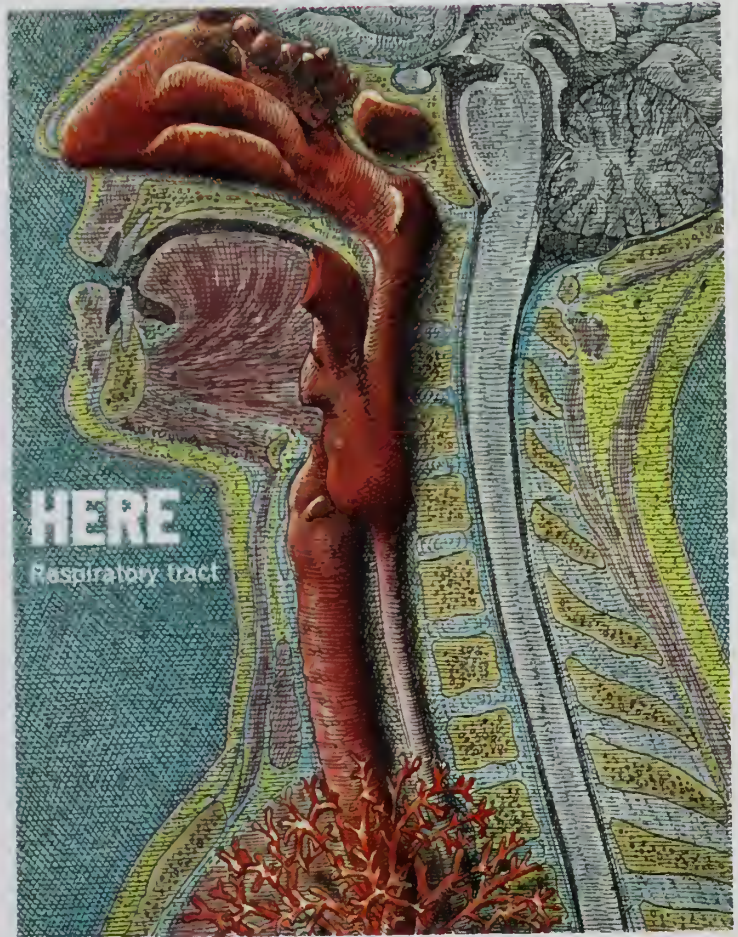


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Indications: Lomotil is effective as adjunctive therapy in the management of diarrhea.

Contraindications: In children less than 2 years, due to the decreased safety margin in younger age groups, and in patients who are jaundiced or hypersensitive to diphenoxylate HCl or atropine.


Warnings: Use with caution in young children, because of variable response, and with extreme caution in patients with cirrhosis and other advanced hepatic disease or abnormal liver function tests, because of possible hepatic coma. Diphenoxylate HCl may potentiate the action of barbiturates, tranquilizers and alcohol. In theory, the concurrent use with monoamine oxidase inhibitors could precipitate hypertensive crisis.

Usage in pregnancy: Weigh the potential benefits against possible risks before using during pregnancy, lactation or in women of childbearing age. Diphenoxylate HCl and atropine are secreted in the

breast milk of nursing mothers.

Precautions: Addiction (dependency) to diphenoxylate HCl is theoretically possible at high dosages not exceed recommended dosages. Administer with caution to patients receiving addicting drugs known to be addiction prone or having a history of drug abuse. The subtherapeutic amount of atropine is added to discourage deliberate overdosage. Strictly observe contraindications, warnings and cautions for atropine; use with caution in children since signs of atropinism may occur even with recommended dosage.

Adverse reactions: Atropine effects include dryness of skin and mucous membranes, flushing and urinary retention. Other side effects with Lomotil include nausea, sedation, vomiting, swelling of gums, abdominal discomfort, respiratory depression, numbness of the extremities, headache, dizziness, depression, malaise, drowsiness, coma, lethargy.



Many
things
can cause
diarrhea.

LOMOTIL®
will almost
surely stop it.

The causes of diarrhea are as varied as man's complaints and indiscretions. Because the causes of diarrhea can be obscure and because uncontrolled diarrhea can present serious problems, it is important to know a drug that will usually stop diarrhea promptly. For many physicians, the antidiarrheal drug of choice is Lomotil. It provides almost certain control of diarrhea.

It is also useful in controlling the intestinal transit time of patients with ileostomies and colostomies and the diarrhea occurring after gastric surgery.

Serious side effects are infrequent with Lomotil. It should be used with caution in young children, however, because of their variability in response. Use of Lomotil in children under two years of age is contraindicated.

**For the almost certain
control of diarrhea,**

LOMOTIL®

TABLETS/LIQUID

Each tablet and each 5 ml. of liquid contain:
Diphenoxylate hydrochloride 2.5 mg.
(Warning: may be habit forming)
Atropine sulfate 0.025 mg.

SEARLE

SEARLE & CO.
San Juan, Puerto Rico 00936

Address medical inquiries to:
G. D. Searle & Co., Medical Department
Box 5110, Chicago, Illinois 60680

or a, restlessness, euphoria, pruritus, angioneu-
dema, giant urticaria and paralytic ileus.

Contraindications and administration: Lomotil is contraindi-
cated in children less than 2 years old. Use only
liquid for children 2 to 12 years old. For
children 2 to 5 years, 4 ml. (2 mg.) t.i.d.; 5 to 8 years,
4 ml. (2 mg.) q.i.d.; 8 to 12 years, 4 ml. (2 mg.) 5
times daily; adults, two tablets (5 mg.) t.i.d. to two
tablets (5 mg.) q.i.d. or two regular teaspoonfuls (10
mg.) q.i.d. Maintenance dosage may be as
low as one fourth of the initial dosage. Make down-
ward dosage adjustment as soon as initial symptoms
are controlled.

Precautions: Keep the medication out of the reach
of children since accidental overdosage may cause
even fatal, respiratory depression. Signs of
overdosage include flushing, lethargy or coma, hypo-
reflexes, nystagmus, pinpoint pupils, tachy-
cardia and respiratory depression which may occur

12 to 30 hours after overdose. Evacuate stomach by
lavage, establish a patent airway and, when neces-
sary, assist respiration mechanically. Use a narcotic
antagonist in severe respiratory depression. Obser-
vation should extend over at least 48 hours.

Dosage forms: Tablets, 2.5 mg. of diphenoxylate
HCl with 0.025 mg. of atropine sulfate. Liquid, 2.5
mg. of diphenoxylate HCl and 0.025 mg. of atropine
sulfate per 5 ml. A plastic dropper calibrated in in-
crements of ½ ml. (total capacity, 2 ml.) accom-
panies each 2-oz. bottle of Lomotil liquid.

Dosage forms: Tablets, 2.5 mg. of diphenoxylate
HCl with 0.025 mg. of atropine sulfate. Liquid, 2.5
mg. of diphenoxylate HCl and 0.025 mg. of atropine
sulfate per 5 ml. A plastic dropper calibrated in in-
crements of ½ ml. (total capacity, 2 ml.) accom-
panies each 2-oz. bottle of Lomotil liquid.

Who knows what evil lurks in the mucous membranes?

Ornade[®] knows.

Each Spansule[®] (brand of sustained release capsule) contains 8 mg. of Teldrin[®] (brand of chlorpheniramine maleate); 50 mg. of phenylpropanolamine hydrochloride; and 2.5 mg. of isopropamide, as the iodide.

Knows the public's enemies — nasal congestion, runny nose, sneezing, watery eyes.

Knows what to do about them too.

All through the dark night of upper respiratory difficulty, while ordinary cold remedies wear off, the decongestant, antihistamine, and drying agent in 'Ornade' fight the never-ending battle for comfort, symptomatic relief, and free airways.

Ornade[®]. Why not let it help fight your patient's cold war.

Before prescribing, see complete prescribing information in SK&F literature or PDR.

Indications: Upper respiratory congestion and hypersecretion associated with: the common cold; acute and chronic sinusitis; vasomotor rhinitis; allergic rhinitis (hay fever, "rose fever," etc.).

Contraindications: Hypersensitivity to any component; concurrent MAO inhibitor therapy; severe hypertension; bronchial asthma; coronary artery disease; stenosing peptic ulcer; pyloroduodenal or bladder neck obstruction. Children under 6.

Warnings: Caution patients about activities requiring alertness (e.g., operating vehicles or machinery). Warn patients of possible additive effects with alcohol and other CNS depressants.

Usage in Pregnancy: In pregnancy, nursing mothers and women who might bear children, weigh potential benefits against hazards. Inhibition of lactation may occur.

Effect on PBI Determination and I^{131} Uptake: Isopropamide iodide may alter PBI test results and will suppress I^{131} uptake. Substitute thyroid tests unaffected by exogenous iodides.

Precautions: Use cautiously in persons with cardiovascular disease, glaucoma, prostatic hypertrophy, hyperthyroidism.

Adverse Reactions: Drowsiness, excessive dryness of nose, throat or mouth; nervousness; or insomnia. Also, nausea, vomiting, epigastric distress, diarrhea, rash, dizziness, weakness, chest tightness, angina pain, abdominal pain, irritability, palpitation, headache, incoordination, tremor, dysuria, difficulty in urination, thrombocytopenia, leukopenia, convulsions, hypertension, hypotension, anorexia, constipation, visual disturbances, iodine toxicity (acne, parotitis).

Supplied: Bottles of 50 capsules.

SK&F Smith Kline & French Laboratories

P r o g r a m
of the
112th ANNUAL SESSION
of the
MEDICAL ASSOCIATION OF THE STATE OF ALABAMA
ADMIRAL SEMMES HOTEL—MOBILE
APRIL 12, 13, 14, 1973

The 112th Annual Session of the Medical Association of the State of Alabama will convene at 9 a. m., on Thursday, April 12, 1973, in the Ballroom of the Admiral Semmes Hotel, Mobile, Alabama.

The opening session will be called to order by F. M. Phillippi, Jr., M. D., President of the Association. It will be followed by the Orientation Program for new members with E. E. Camp, M. D., President-Elect, presiding.

Three scientific sessions will be held, also in the Ballroom, featuring outstanding speakers.

Registration

The registration desk for Counsellors, Delegates and members of the Association will be located in the main lobby of the Admiral Semmes Hotel.

The Registration desk will be open from 8:00 a. m., until 5:00 p. m. on Wednesday, Thursday and Friday, April 11, 12, 13 and from 7:30 a. m. until 10:30 a. m., on Saturday.

Counsellors and Delegates may register in advance and claim their badges, a copy of the official program and any other material upon which they will be called to make decisions after signing the official registration card at the Registration Desk.

Members and guests also will be required to sign official registration cards, which may be obtained at the Registration Desk at the times stated above.

Exhibitor's Registration

Representatives of Scientific and Commercial exhibitors may register at the Registration desk beginning at 1:00 p. m. on Wednesday, April 11.

Badges

No person will be admitted to any scientific, business or social session of the Association, or to the exhibit area, without an official badge.

Speakers

Speakers will be called in the order in which they appear on the program. Should a speaker be absent when called, his paper will be passed and called again upon conclusion of the program.

Hotel Reservations

Headquarters hotel will be the Admiral Semmes Hotel. Priority for the limited number of rooms available has been assigned to Counsellors, Delegates, Officers of the Association and guest speakers. When the supply

of rooms is exhausted, applicants will be referred to other nearby hotels and motels.

Social Events

A full listing of social events of the 112th Annual Session will be published in the official program, available at the time of registration.

Tickets

Tickets for social events should be purchased in advance if possible. Otherwise, a limited number will be available at the Registration desk.

Specialty Groups

Scientific presentations of medical specialty groups will be scheduled either before or after the Annual Session in conformance with the Constitution and Ordinances which forbid this type of meeting during the three days allotted to the Annual Session. Social events for specialty groups and alumni organizations will be held at places and times to be announced in the official program.

Auxiliary Luncheon

The Woman's Auxiliary to the Medical Association of the State of Alabama will hold its 50th Anniversary Luncheon on Thursday, April 12, at 1:00 p.m., at the Grand Hotel, Point Clear. Mrs. Robert F. Beckley, Lock Haven, Pennsylvania, President of the Woman's Auxiliary to the American Medical Association, will be the honored guest.

Medical Society of Mobile County Reception

The Medical Society of Mobile County will be host at a Reception featuring Seafood Hors d'oeuvres on Thursday from 5:30 to 7:30 p. m., in the Ballroom of the Admiral Semmes Hotel.

ALAPAC Luncheon

The annual ALAPAC Luncheon will be held in the Ballroom of the Admiral Semmes Hotel at 12:30 p. m. on Friday, April 13, 1973, with Governor Otis R. Bowen, Indiana, as principal speaker. Consult the official program for additional information.

Awards Dinner

The Awards Dinner will be held in the Ballroom of the Admiral Semmes Hotel at 7:00 p. m. on Friday, April 13. The dinner will be sponsored by the Committee on Community Affairs in honor of the winners of the 1973 awards, past presidents and members of the Fifty Year Club. The following new members will be inducted into the Fifty Year Club.

James Fairly Alison, Sr., M. D.

William Aura Cunningham, M. D.

Henry Grady Ford, M. D.

James Kern Haygood, M. D.

Joseph Robert Horn, M. D.

Marcus Crew Hunt, M. D.

Travis Pratt McGahey, M. D.

Frederick Guy Merrill, M. D.

William Lindsay Miller, M. D.

Lee Roy Murphree, M. D.

John LaFayette Shamblin, M. D.

Walton H. Y. Smith, M. D.

Selden Harbour Stephens, Sr., M. D.

James Sidney Tarwater, M. D.

Awards will be presented by H. C. Mullins, M. D., Chairman of the Committee on Community Affairs, to the following:

Douglas L. Cannon Medical Reporter Award to reporters, editors or publishers, of an Alabama newspaper, or to radio-television personalities who have shown excellence in factual reporting of medical news and for outstanding effort in elevating medical news coverage: Carol W. Wyatt, reporter for the **Talladega Daily Home**, Talladega, Alabama.

The William Henry Sanders Award for outstanding work above and beyond the call of duty by a full-time public health worker to Betty W. Vaughan, M. D., Public Health Officer for Morgan, Lawrence and Limestone Counties, Alabama.

The William Crawford Gorgas Award for a citizen not actively engaged full time in the field of health who has been outstanding

in his efforts in health work to Joel E. Johnson, President of the Citizens Bank, Geneva, Alabama.

The Samuel Buford Word Award in recognition of service to humanity beyond the usual scope of medical practice, such service to have been rendered at some personal sacrifice, to E. L. Gibson, M. D., Enterprise, Alabama.

The principal Speaker will be Mr. L. L. L. Golden, New York. Mr. Golden is a Public Affairs Counsel, author of **Only by Public Consent**, and a columnist for "Saturday Review Magazine" on Public Relations.

Other Events

The annual reception for representatives of exhibitors at the 112th Annual Session will be held from 4:00 p. m. to 5:00 p. m., on Wednesday, April 11 in the Alabama Room of the Admiral Semmes Hotel. Officers and members of the Board of Censors and Board of Trustees will be hosts at this reception.

Hosts of the Association

Official host of the Association will be the Medical Society of Mobile County, W. H. Avant, M. D., President. A Host Committee will be assigned to provide transportation and escorts for visiting dignitaries.

Board of Trustees

The Board of Trustees will meet at 9:00 a. m., on Wednesday, April 11, in Room 1212 of the Wallace Pitts Suite of the Admiral Semmes Hotel. All Counsellors, Delegates and members of the Association are cordially invited to sit with the Board of Trustees and to present their views on matters under consideration.

Board of Censors

The Board of Censors will meet at 9:00 a. m., on Wednesday, April 11, in Room 1223 of the Wallace Pitts Suite of the Admiral Semmes Hotel to transact official business concerning the State Board of Medical Examiners and the State Committee of Public Health. Upon completion of discussions

relating to the Board of Medical Examiners and the Committee of Public Health, the Board of Censors will convene to officially consider Association Affairs, including matters referred by the Board of Trustees.

Alumni Meetings

The University of Alabama Alumni dinner will be held in the Ballroom of the Admiral Semmes Hotel at 8 p. m. All members of the Medical Association of the State of Alabama and their wives are invited.

Tulane Alumni Reception will be held in Room 1212 on Thursday, April 12 at 6:00 p. m.

Vanderbilt Alumni Reception will be held Thursday, April 12, at 6:00 p. m. in the Alabama Room of the Admiral Semmes Hotel.

The President's Prayer Breakfast is scheduled for 7:30 a. m., Friday, April 13 in the Alabama Room of the Admiral Semmes Hotel. Tickets will be on sale at the Registration Desk for all members and their wives.

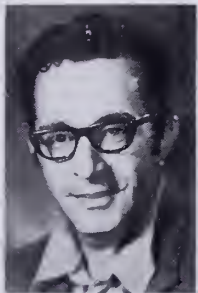
PROGRAM

Opening Session

Thursday, April 12, 1973
Ballroom
Admiral Semmes Hotel
Mobile, Alabama



F. M. Phillippi, Jr., M. D.,
Brewton, President,
Presiding



9:00 A. M.
Call to Order
Invocation
Dr. A. A. Stamler, Decatur
Chairman, Committee on
Medicine and Religion



9:05 A. M.

Welcome Address

Honorable Lambert C. Mims,
Mayor, City of Mobile

9:10 A. M.

Welcome Address

W. Harold Avant, M. D.,
President, Mobile County
Medical Society

Orientation



Ballroom

E. E. Camp, M. D., Hunts-
ville, President-Elect,
Presiding



9:10-9:40 A. M.

Interphysician Relationships

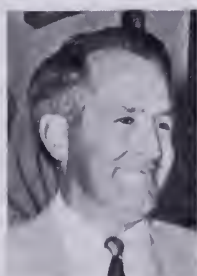
W. Harold Avant, M. D.,
Mobile



9:40-10:05 A. M.

Business Side of Medicine

Shearen Elebash
Montgomery



10:05-10:30 A. M.

Community Relations

H. C. Mullins, M. D.
Fairhope

10:30-10:45 A. M.

COFFEE BREAK—EXHIBIT ROOM



10:45-11:15 A. M.

Medico-Legal Problems

Roscoe Roberts, Jr., J. D.
Huntsville



11:15-11:45 A. M.

PRESIDENT'S MESSAGE

F. M. Phillippi, Jr., M. D.,
Brewton

1:00 P. M.

Auxiliary Luncheon

Grand Hotel, Point Clear



Mrs. George Hansberry, De-
catur, President, Presiding
Honor Guest, Mrs. Robert F.
Beckley, President,
Woman's Auxiliary to
AMA

Government in Medicine

Thursday, April 12, 1973

Ballroom

Admiral Semmes Hotel

Picture

2:00-2:30 P. M.

Not

The Consumer's Viewpoint

Available

Harry Schwartz, Editorial
Board, The New York
Times, New York, New
York

2:30-3:00 P. M.

The Government's Viewpoint

Picture
Not
Available

Douglass M. Richard
Department of Health,
Education and Welfare,
Atlanta, Georgia

3:00-3:20 P. M.

COFFEE BREAK—EXHIBIT ROOM

3:20-3:50 P. M.

The Dean's Viewpoint

Robert M. Bucher, Dean,
University of South Ala-
bama School of Medicine,
Mobile

3:50-4:20 P. M.

The Physician's Viewpoint

James H. Sammons, M. D.,
Baytown, Texas

4:20-5:00 P. M.

Round-Table Discussion

5:30-7:30 P. M.

Welcome to Mobile Reception

Seafood Hors d'oeuvres

First Scientific Session

Friday, April 13, 1973

Ballroom

F. M. Phillippi, Jr., M. D.,
Brewton, President,
Presiding

9:00-9:40 A. M.

Shock

Picture
Not
Available

James M. Wilson, M. D.,
Ph. D., Department of
Pathology, School of Medi-
cine, Duke University
Durham, North Carolina

9:40-10:20 A. M.

Pediatric Orthopaedics

Wood W. Lovell, M. D.,
Atlanta, Georgia

10:20-10:40 A. M.

COFFEE BREAK—IN EXHIBIT HALL

10:40-11:30 A. M.

Jerome Cochran Lecture

Carl Hoffman, M. D., Presi-
dent, American Medical
Association, Chicago, Illi-
nois

11:30 A. M.-12:15 P. M.

CAUCUS OF COUNSELLORS AND DELEGATES

ALAPAC Luncheon

Friday, April 13, 1973

Ballroom

12:30 P. M.

Grover C. Murchison, Jr.,
M. D., Montgomery, Chair-
man, ALAPAC, Presiding



Invocation

Rev. Dr. Jaroy Weber,
Pastor, Dauphin Way Baptist Church, Mobile

2:40-3:20 P. M.

Implications of Hyperglycemia

Picture
Not
Available

Ronald A. Arky, M. D.,
Chief, Division of Medicine
Mount Auburn Hospital,
Cambridge, Massachusetts



Introduction of Speaker

Hon. Jere Beasley,
Lt. Governor, State of Alabama, Montgomery

3:20-3:40 P. M.

COFFEE BREAK—EXHIBIT ROOM

3:40-4:20 P. M.

Glaucoma

Picture
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Available

Ralph Z. Levene, M. D., Director of Eye Research,
The Eye Foundation, Inc.
Birmingham

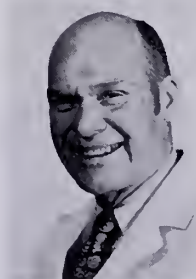


Speaker

Hon. Otis R. Bowen, Governor of Indiana

4:20-5:00 P. M.

Nature and Nurture of Physicians



Joseph V. Fisher, M. D.,
Head of Family Physicians
Department, University of
South Carolina School of
Medicine, Chairman, Mental
Health Committee of
AAFP, Charleston, South
Carolina

Second Scientific Session



Friday, April 13, 1973

Ballroom

F. M. Phillippi, Jr., M. D.,
Brewton, President, Presiding

Awards Dinner

Friday, April 13, 1973

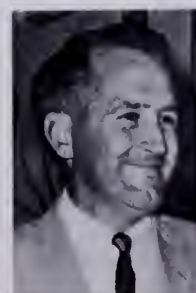
Ballroom

7:00 P. M.

2:00-2:40 P. M.

Components of an Effective Medical Examiners System

Russell S. Fisher, M. D.,
Chief Medical Examiner,
Department of Post Mortem Examiners, Baltimore, Maryland



H. C. Mullins, Jr., M. D.,
Fairhope, Chairman, Presiding



Invocation

Rev. Stephen F. Dill, Pastor
Dauphin Way United
Methodist Church, Mobile

Awards Presentations

Harry J. Till, M. D., Presiding

William Crawford Gorgas Award

William Henry Sanders Award

Douglas L. Cannon Medical Reporter Award

S. Buford Word Award

Introduction of Distinguished Guests and
Fraternal Delegates

F. M. Phillippi, M. D., President
Medical Association of the State of Alabama

Presentation of Fifty Year Club Members

James Fairly Alison, Sr., M. D.
William Aura Cunningham, M. D.
Henry Grady Ford, M. D.
James Kern Haygood, M. D.
Joseph Robert Horn, M. D.
Marcus Crew Hunt, M. D.
Travis Pratt McGahey, M. D.
Frederick Guy Merrill, M. D.
William Lindsay Miller, M. D.
Lee Roy Murphree, M. D.
John LaFayette Shamblin, M. D.
Walton H. Y. Smith, M. D.
Selden Harbour Stephens, Sr., M. D.
James Sidney Tarwater, M. D.

Introduction of Past Presidents

Speaker

L. L. L. Golden
Public Affairs Counsel'
Author of "Only by Public
Consent, Columnist for
"Saturday Review Maga-
zine", New York, New
York



The Association gratefully acknowledges the financial contributions made by Eli Lilly and Company, Geigy Pharmaceuticals, A. H. Robins Company, Blue Cross-Blue Shield of Alabama, Durr Surgical Supply Companies (Mobile, Montgomery, Birmingham, Huntsville), Bedsole Surgical Supply Company, and Gentec Hospital Supply Company.

Annual Business Session

Saturday, April 14, 1973

Ballroom

F. M. Phillippi, Jr., M. D., Brewton,
President, Presiding

9:00 A. M.

Presentation by the Woman's Auxiliary to the Medical Association of the State of Alabama.

1. Report of State Department of Public Health, Ira A. Myers, M. D., State Health Officer
2. Report of the State Board of Medical Examiners
3. Report of the Board of Censors on Association Affairs
 - (a) Approval of the 1972 Transactions
 - (b) Unfinished Business—Consideration of Pending Resolutions to Amend Constitution and Ordinances
 - (c) Financial Report
 - (d) Adoption of 1974 Budget
 - (e) Revision of the Rolls
 - (f) Report of Reference Committees
 - (g) Election and Installation of Officers
 - (h) Adjourn

Answers To Questions

Patients Ask: About Pregnancy

Some pregnant women feel better than they ever have before. Others just don't feel like themselves at all. The traditional image of the radiant and serene expectant mother applies to many women, but not to all. That's because pregnancy is a time of great physio-

(Continued on Page 652)



around the state

Vital Statistics

NEW MEMBERS

Calhoun County

Sherrer, John William, b 30, mc Howard U. College of Med. 67, recip. Ohio 72, 1000 Christine Ave., Anniston, Alabama 36201. GP.

Macon County

Hamlett, Mary Kline, b 37, mc Ala. 67, sb 68, Lakeshore Clinic, P. A., Tuskegee, Alabama 36083. GP.

Morgan County

Overstreet, Charles Reynold, b 40, mc Ala. School of Med. 66, recip. NBME 67, Decatur General Hospital, 1120 Somerville Rd., S. E., Decatur, Alabama 35601. Anes.

Russell County

Strickland, Worthy Edward, b 38, mc Georgia 66, recip. Georgia 72, 1906 20th Ave., Phenix City, Alabama 36867. ObG.

Talladega County

Crook, James Lester, b 40, mc Baylor U. College of Med. 67, recip. Texas 72, c/o Craddock Clinic, Syacauaga, Alabama 35150. S.

MEMBERS DECEASED

Dallas County

Feulner, Charles Daniel, Prattville, Alabama, Deceased 1/7/73.

Jefferson County

Linder, Browne Garrison, Birmingham, Alabama, Deceased 10/12/72.

CHANGES OF ADDRESS

Bibb County

Owings, William O., present Centreville to 128 Nicholson Ave., Centreville, Alabama 35042.

Crenshaw County

Neshat, Amir A., present Luverne to Apt. 4-B Veteran's Dr., Asheville, N. C. 28805.

Cullman County

Williams, Roy W., present Cullman to 700 2nd Ave., S. W., Cullman, Alabama 35055.

Escambia County

Wood, Herman C., present Brewton to 710 Jasmine, New Port Richey, Florida 33552.

Houston County

Field, Mason D., present Dothan to 509 W. Main St., Dothan, Alabama 36301.

Jefferson County

Hunter, John W., Jr., present Birmingham to Veterans Adm. Hosp., Loop Rd., Tuscaloosa, Alabama 35401.

Lauderdale County

Ellis, Bert H., present Florence to Apt. 32-B-8 Old Popular Springs Apts., Popular Springs Dr., Meridian, Miss. 39301.

Luckey, Carl F., present Florence to P. O. Box 2303, Florence, Alabama 35630.

Trousdale, Preston S., present Florence to P. O. Box 2303, Florence, Alabama 35630.

Walden, Joe D., present Florence to 125 Fairground Rd., Box B-A, Florence, Alabama 35630.

(Continued on Page 647)

IN ASTHMA IN EMPHYSEMA



*optional
therapy*



THE mudranes®

All Mudranes are bronchodilator-mucolytic in action, and are indicated for symptomatic relief of bronchial asthma, emphysema, bronchiectasis and chronic bronchitis. **MUDRANE** tablets contain 195 mg. potassium iodide; 130 mg. aminophylline; 21 mg. phenobarbital (Warning: may be habit-forming); 16 mg. ephedrine HCl. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline-phenobarbital-ephedrine combinations. **Iodide side-effects:** May cause nausea. Very long use may cause goiter. Discontinue if symptoms of iodism develop. **Iodide contraindications:** Tuberculosis; pregnancy (to protect the fetus against possible depression of thyroid activity). **MUDRANE-2** tablets contain 195 mg. potassium iodide; 130 mg. aminophylline. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline. **Iodide side-effects and contraindications** are listed above. **MUDRANE GG** tablets contain 100 mg. glyceryl guaiacolate; 130 mg. aminophylline; 21 mg. phenobarbital (Warning: may be habit-forming); 16 mg. ephedrine HCl. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline-phenobarbital-ephedrine combinations. **MUDRANE GG-2** tablets contain 100 mg. glyceryl guaiacolate; 130 mg. aminophylline. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions:** Those for aminophylline. **MUDRANE GG Elixir.** Each teaspoonful (5 cc) contains 26 mg. glyceryl guaiacolate; 20 mg. theophylline; 5.4 mg. phenobarbital (Warning: may be habit-forming); 4 mg. ephedrine HCl. **Dosage:** Children, 1 cc for each 10 lbs. of body weight; one teaspoonful (5 cc) for a 50 lb. child. Dose may be repeated 3 or 4 times a day. Adult, one tablespoonful, 4 times daily. All doses should be followed with $\frac{1}{2}$ to full glass of water. **Precautions:** See those listed above for Mudrane GG tablets.

MUDRANE—original formula *First choice*

MUDRANE-2 *When ephedrine is too exciting or is contraindicated*

MUDRANE GG *During pregnancy or when K.I. is contraindicated or not tolerated*

MUDRANE GG-2 *A counterpart for Mudrane-2*

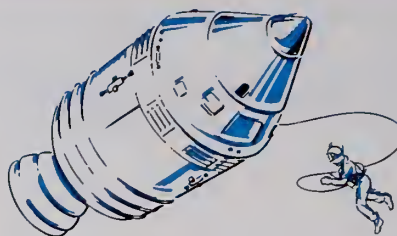
MUDRANE GG ELIXIR *For pediatric use or where liquids are preferred*

*Clinical specimens
available to physicians.*

WILLIAM P. POYTHRESS & COMPANY, INC., RICHMOND, VIRGINIA 23217

Manufacturers of Ethical Pharmaceuticals





Man in space, now fait accompli, re-emphasizes the importance of Uro-Phosphate therapy. Research into the effect of space travel on the astronaut reveals that weightlessness causes loss of bone calcium. As the bones are required to bear less and less of the weight of the body they lose calcium, increasing the calcium content of the urine. When physical activity is reduced, the acidity of the urine should be adjusted to keep increased calcium in solution . . . a prophylaxis to prevent kidney or bladder calculi.

Uro-Phosphate®

NOW A SUGAR-COATED TABLET

Each tablet contains: METHENAMINE, 300 mg.; SODIUM ACID PHOSPHATE, 500 mg.

Uro-Phosphate gives comfort and protection when inactivity causes discomfort in the urinary function. It keeps calcium in solution, preventing calculi; it maintains clear, acid, sterile urine; it encourages

complete voiding and lessens frequency when residual urine is present.

Uro-Phosphate contains sodium acid phosphate, a natural urinary acidifier. This component is fortified with methenamine which is inert until it reaches the acid urinary bladder. In this environment it releases a mild antiseptic keeping the urine sterile.

Uro-Phosphate is safe for continuous use. There are no contra-indications other than acidosis. It can be given in sufficient amount to keep the urine clear, acid and sterile. A heavy sugar coating protects its potency.

Dosage:

For protection of the inactive patient 1 or 2 tablets every 4 to 6 hours is usually sufficient to keep the urine clear, acid and sterile.

2 tablets on retiring will keep residual urine acid and sterile, contributing to comfort and rest.

A clinical supply will be sent to physicians and hospitals on request.



WILLIAM P. POYTHRESS & COMPANY, INC., RICHMOND, VIRGINIA 23217

Manufacturers of Ethical Pharmaceuticals

AROUND THE STATE

(Continued from Page 644)

Lee County

Schlichter, Frank J., Jr., present Opelika to 4247 Forest Plaza Dr., Hison, Tenn. 37343.

Marion County

Fuson, Edna P., present Tallassee, Alabama to P. O. Box 112, Jacksonville, Alabama 36265.

Mobile County

Cowden, Robert W., present Mobile to 107 Ryan Ave., Mobile, Alabama 36607.

Flynn, Edward J., Jr., present Mobile to 730 Heatherwood Rd., Bluefield, W. Virginia 24701.

Montgomery County

Bazar, Philip S., present Montgomery to 2610 Fernway Dr., Montgomery, Alabama 36111.

Kocour, Elmer J., present Montgomery to 2048 Fairview, Montgomery, Alabama 36108.

Selikoff, S. J., present Montgomery to 2201 E. South Blvd., P. O. Box 11257, Montgomery, Alabama 36111.

Pike County

Brantley, James A., present Troy to 318 W. Walnut St., P. O. Box 462, Troy, Alabama 36081.

Brantley, James C., present Troy to 317 Murphree St., P. O. Box 462, Troy, Alabama 36081.

Stewart, William P., present Troy to 315 W. Walnut St., P. O. Box 416, Troy, Alabama 36081.

Tuscaloosa County

Brock, Ernest C., Jr., present Tuscaloosa to 535-B-River Rd., Tuscaloosa, Alabama 35401.

Daly, Edgar M., present Tuscaloosa to 400-D-10th St., East, Tuscaloosa, Alabama 35401.

Fitts, Floyd O., present Tuscaloosa to 535-B-River Rd., Tuscaloosa, Alabama 35401.

Sneed, David G., present Tuscaloosa to 4631 Water Oak Lane, Jacksonville, Florida 32200.

Taylor, William A., present Tuscaloosa to 535-B-River Rd., Tuscaloosa, Alabama 35401.

NEW TELEPHONE NUMBERS

Andrews, G. L., Dale	774-5182
Crook, J. L., Talladega	245-5241
Hamlett, M. K., Macon	727-5900
Marshall, W. S., Montgomery	281-3870
Overstreet, C. R., Morgan	353-1610
Owings, W. O., Bibb	926-9775
Rayfield, J. D., Talladega	236-7521
Sherrer, J. W., Calhoun	236-0387
Strickland, W. E., Russell	298-0671

CHANGE OF SPECIALTY

Montgomery County

Laslie, J. Cobb, 849 Washington Ave., Montgomery, Alabama 36104. GP-G.

MEMBER TRANSFERRED

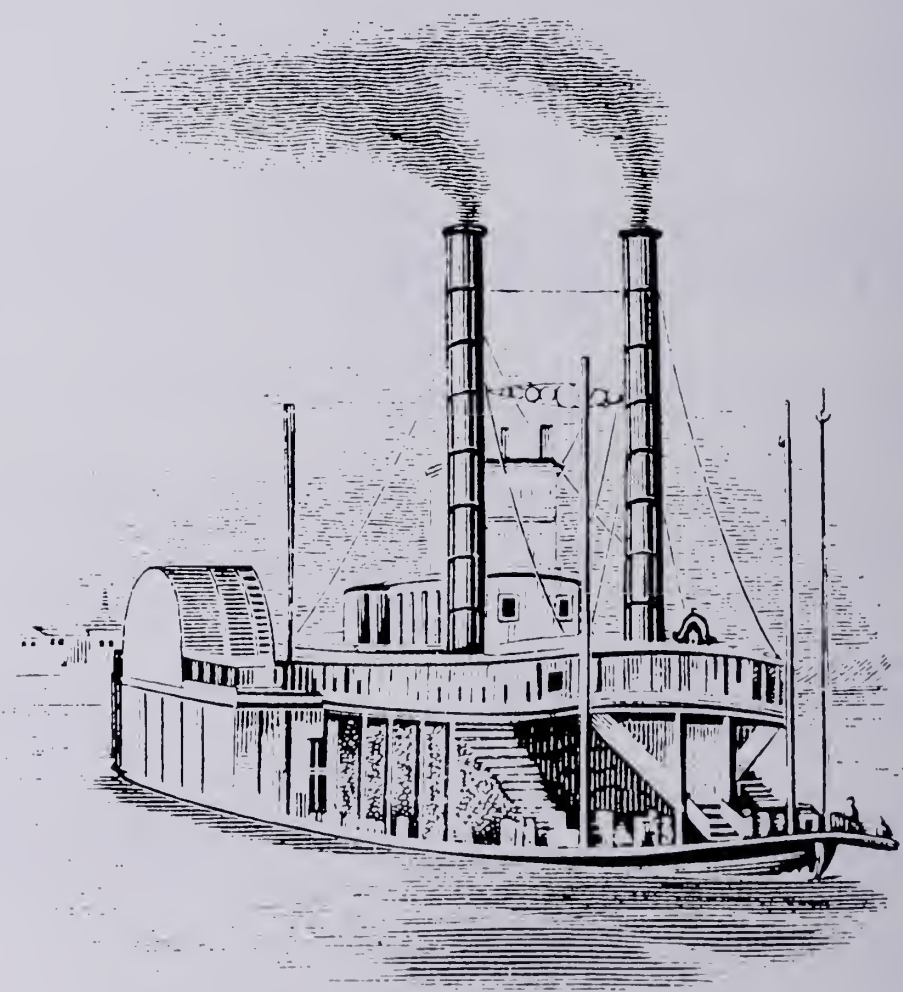
Colbert County

Bowen, Robert K., Jr., 1111 S. Raleigh Ave., Sheffield, Alabama 35660, from member of Jefferson County Medical Society to member of Colbert County Medical Society. S.

Add one more chapter to the story of the complex human body: A team of University of Chicago and Argonne National Laboratory scientists has discovered that the optic nerve, which transmits signals from the eye to the brain, contains 1.2 million individual nerve fibers.

Alabama's first meeting of a Medical Society was held at Mobile in 1847. Physicians from the northern section of the State probably traveled by horseback or stagecoach to Tuscaloosa, then by riverboat to Mobile.

BLUE CROSS-BLUE SHIELD OF ALABAMA



New Physicians Licensed to Practice in Alabama



T. W. Armstrong,
M. D.
Anniston



G. A. W. Boehm,
M. D.
Huntsville



R. P. Castleberry, Jr.,
M. D.
Birmingham



J. S. Chase,
M. D.
Mobile



C. R. Chatterjee,
M. D.
Birmingham



N. L. Cunningham,
M. D.
Mobile



P. L. Davis, Jr.,
M. D.
Birmingham



C. F. Felgner,
M. D.
Birmingham



S. J. Galle, Jr.,
M. D.
Mobile



L. N. Goldman,
M. D.
Birmingham



C. W. Hartzog,
M. D.
Birmingham



S. S. Juk, Jr.,
M. D.
Birmingham

AROUND THE STATE



A. E. Kirk,
M. D.
Enterprise



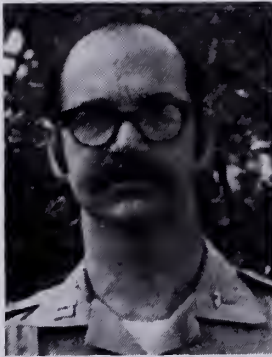
J. M. Koors,
M. D.
Birmingham



J. R. Mayfield,
M. D.
Opelika-Auburn



R. D. Meyer,
M. D.
Birmingham



S. L. Millman,
M. D.
Ft. Benning, Ga.



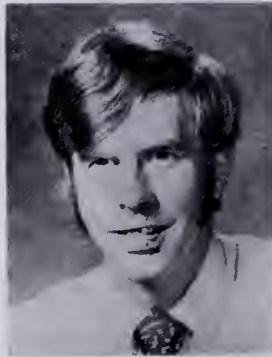
M. E. Morin,
M. D.
Huntsville



R. S. Naftel,
M. D.
Birmingham



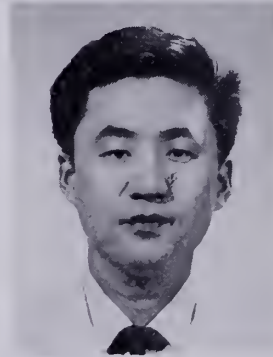
A. J. Oliverie,
M. D.
Ft. McClellan



L. F. Pinkley, Jr.,
M. D.
Mobile



A. S. Rosemore
M. D.



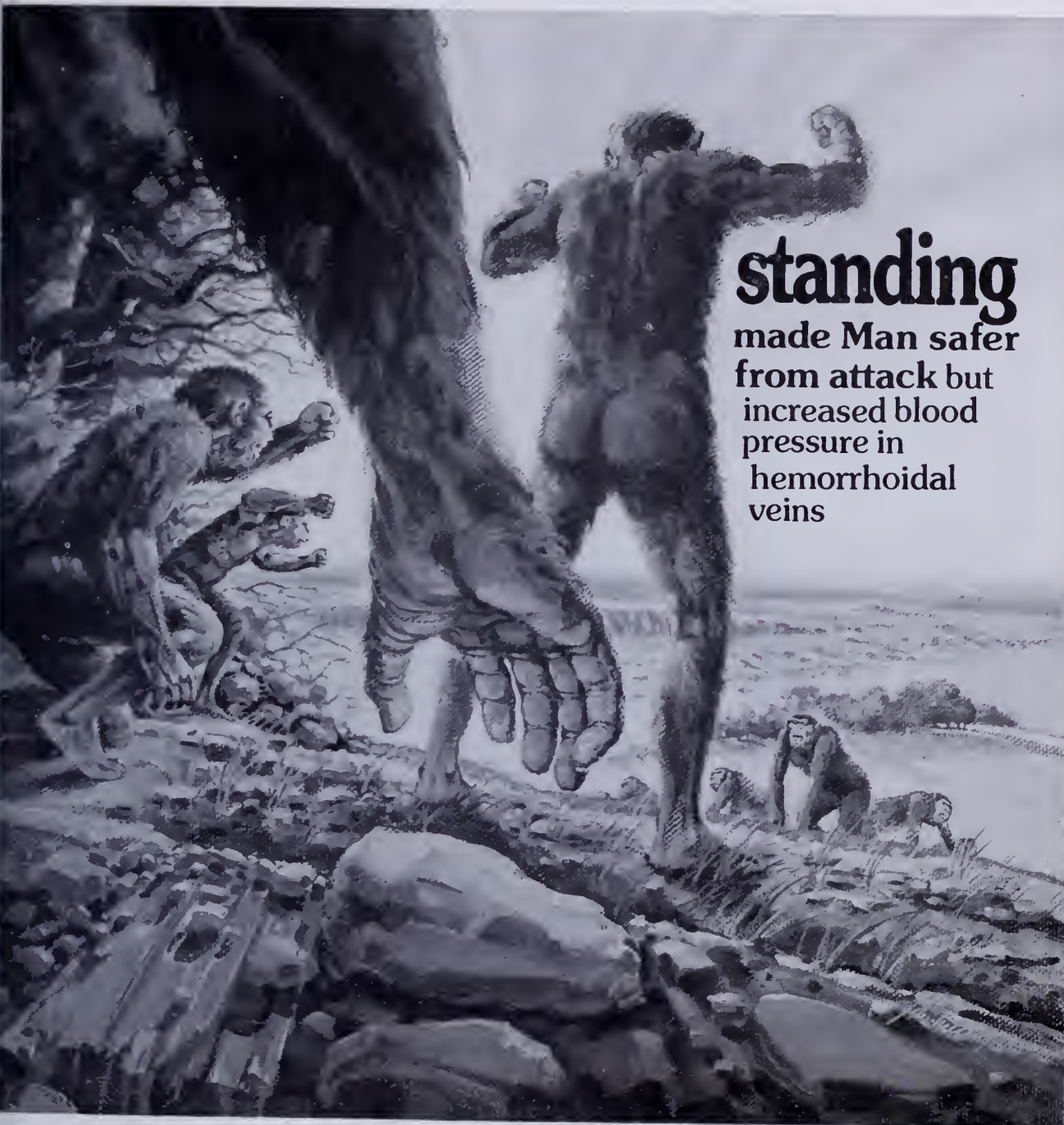
Jwa-II Seo,
M. D.
Birmingham



H. N. West, III,
M. D.
Birmingham



C. S. Wingard,
M. D.
Birmingham



standing
made Man safer
from attack but
increased blood
pressure in
hemorrhoidal
veins

to help ease
acute symptoms of hemorrhoids **Anusol·HC[®]**

Hemorrhoidal Suppositories with Hydrocortisone Acetate. On your Rx only!
Each suppository contains hydrocortisone acetate 10 mg; bismuth subgallate 2.25%;
bismuth resorcin compound 1.75%; benzyl benzoate 1.2%; Peruvian balsam 1.8%; zinc
oxide 11.0%; and boric acid 5.0%; plus the following inactive ingredients: bismuth
subiodide, calcium phosphate, and coloring in a bland hydrogenated
vegetable oil base containing cocoa butter.

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patient
comfort **Anusol[®]**

Suppositories and Ointment Each suppository or gram of
ointment contains the active ingredients of an Anusol-HC
suppository minus the hydrocortisone.

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Morris Plains, New Jersey
07950

ANGP-33

(Continued from Page 643)

logical and psychological readjustments, and no two women are similarly affected.

According to *PREGNANCY AND YOU* by Aline B. Auerbach and Helene S. Arnstein, a new Public Affairs Pamphlet, a wide range of feelings during pregnancy is normal. The authors point out that "misgivings are quite common during the early stages of pregnancy.... Certainly pregnancy and childbirth involve more changes in your life at one time—physical, emotional, and practical—than you've ever had to make before or may ever have to make again. Like adolescence, this is a time of dramatic change within your body, which leads to changes in your feelings and thoughts."

PREGNANCY AND YOU is addressed directly to the concerns of pregnant women expecting their first child. It discusses the specific physical and emotional developments that can be expected during each trimester of pregnancy, what to do about an unwanted pregnancy, proper nutrition and health care, the fact and fiction of time-worn beliefs about pregnancy, preparing for labor and delivery, and adjusting family life to the "new addition." And it suggests ways to avoid the "left out" and baffled feelings many fathers-to-be experience when their wives become increasingly absorbed in impending motherhood. The pamphlet is available for 35 cents from the Public Affairs Committee, 381 Park Avenue South, New York, N. Y. 10016.

What are some of the questions pregnant women may be wondering about secretly, or not-so-secretly? Am I maternal? is a common concern. Like most matters related to approaching motherhood "there is no universal timetable for the budding of maternal feelings. They develop in mothers at widely different times—and in varying degrees." Some expectant mothers experience tender feelings at the very inception of their pregnancy, others when they begin to feel the baby move, and others only when they have

had experience taking care of the infant. Motherly feelings are not something to worry oneself about—"they arrive in their own good time."

Will my baby be normal? is another question that nearly all parents-to-be ask themselves. The authors offer the reassuring fact that an American woman's chance of delivering a normal healthy baby is higher today than ever before in human history—about 97 to 98 in 100. Here are some of the precautions an expectant mother can take even before the baby is born to protect its health:

Visit the doctor for regular checkups and follow his suggestions about diet, activity, and exercise.

Report any infection to the physician and tell him if you have been exposed to measles, German measles (rubella), chicken pox, mumps, or any other communicable disease.

Take no drugs without the doctor's knowledge.

Let the doctor know about such symptoms as vaginal bleeding, double vision, frequent headaches or vomiting, abdominal pains, dizziness, swelling of hands, feet, or face, or any other discomfort.

PREGNANCY AND YOU concludes with the reminder that pregnancy and childbirth are only the first step toward parenthood. Caring for a new baby, and watching him develop, produces "a new family which you have created and from which you yourselves gain and grow."

PREGNANCY AND YOU is No. 482 in the Public Affairs Pamphlet series, now in its 37th year. The series includes many other helpful titles covering family relations, health and science, social and economic problems, race relations. All pamphlets are 35 cents each; a list is available on request. Write to the Public Affairs Committee, a non-profit educational organization, 381 Park Avenue South, New York, N. Y. 10016.

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"We Treat Babies Like People"

High Risk Nursery Decreases Mortality Rate

Jefferson County has an infant mortality rate which is decreasing nine times faster than the national rate because the High Risk Nursery at the University of Alabama in Birmingham (UAB) Medical Center "treats babies like people," according to Dr. George Cassady, director of the nursery and professor of pediatrics at the UAB School of Medicine.

"Most people expect their own bed, own nurse and all hospital facilities to be at their disposal when they come into a hospital," Dr. Cassady said. "But hospitals are set up for adults, not babies, and in most hospitals, babies don't get first class treatment."

The babies that are admitted to the High Risk Nursery are infants born prematurely, infants weighing less than five-and-a-half pounds, and infants considered ill at birth. In order to treat these infants like first class patients, Dr. Cassady and his associates have evolved a specialized nursery which, by meeting the medical needs of critically ill infants, could be considered a "baby hospital."

The most stunning results from the High Risk Nursery can be seen with the survival rate of those infants weighing less than two pounds at birth. An international study in the early 1960's showed that children born weighing less than three pounds had a less than 1 per cent chance of surviving, and a 75-80 per cent chance of being seriously impaired, either physically or mentally.

Now, at the High Risk Nursery, infants weighing less than two pounds (one pound less than the 1960's study) have a 20 per cent chance of surviving and a less than ten per cent chance of being impaired.

Summed up in dollars and cents, this

means the community saves money. Dr. Cassady said studies show that seriously impaired persons cost the state at least \$150,000 by the time they reach 45 years of age, due to special schooling requirements, dependency, and the tax money lost because the person is not able to work.

Statistically, Alabama's stillbirth and newborn mortality rate, one of the worst in the U. S., is improving at three times the national rate of improvement. In Jefferson County, where the High Risk Nursery plays a major role in caring for sick infants, the mortality rate is improving at three times that of the state—therefore, nine times that of the nation.

Cassady attributes this fast-paced improvement to the nursery's goal of supplying the infant with total, first class care, and fighting a longtime "fatalistic attitude" of both physicians and the public that sick infants always die.

But the reasons for the improvements go much deeper than that.

The nursery is putting into clinical use methods for totally nourishing premature infants intravenously, for weeks at a time. Prior to birth the infant is fed in a similar manner by the mother, and premature babies may need to continue the "womb-like" nourishment in order to survive and develop properly.

Commonly, premature infants are born with under-developed lungs, lung disease, or poor oxygenation, and may require a respirator. Adult respirators force adult amounts (several ounces) into the lungs, and cause problems for infants whose needs are much less (a fraction of an ounce). The nursery has specially designed respirators

(Continued on Page 658)

**Who
killed
the
wicked
itch**

(and the infection)*

?

snow white

Sporostacin Cream

TRADEMARK

(chlordantoin 1% and benzalkonium chloride 0.05%)

After you write your prescription for two tubes of soothing, fungicidal Sporostacin Cream, tell your patient not to be fooled by the quick relief of symptoms it affords. Make sure she knows how to use it as directed—for the *full* 14-day course of therapy. Then, on follow-up, you'll usually find that nonstaining, easy-to-use Sporostacin Cream has finished off vulvovaginal candidiasis in the nicest possible way.

two tubes...two weeks



*

Indication: Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indication as follows:

"Probably" effective: For the treatment of vulvovaginal candidiasis.

Final classification of the less-than-effective indications requires further investigation.

Contraindications: None known. **Precautions:** Cases of sensitization and irritation have been reported. When noted the drug should be discontinued. **Dosage:** One applicatorful intravaginally twice daily for a period of 14 days. Course of therapy may be repeated if necessary.

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When irritable colon feels like this



... **KINESED®** provides more complete relief.

Gastroenteritis, colitis, gastritis or duodenitis can produce spasm or hypermotility, gas distention and discomfort. But Kinesed can provide a balanced formulation to relieve these symptoms:

- ☐ belladonna alkaloids—for the hyperactive bowel
- ☐ simethicone—for accompanying distention and pain due to gas
- ☐ phenobarbital—for associated anxiety and tension

Contraindications: Hypersensitivity to barbiturates or belladonna alkaloids, glaucoma, advanced renal or hepatic disease.

Precautions: Administer with caution to patients with incipient glaucoma, bladder neck obstruction or urinary bladder atony. Prolonged use of barbiturates may be habit-forming.

Side effects: Blurred vision, dry mouth, dysuria, and other

atropine-like side effects may occur at high doses, but are only rarely noted at recommended dosages.

Dosage: *Adults:* One or two tablets three or four times daily. Dosage can be adjusted depending on diagnosis and severity of symptoms.

Children 2 to 12 years: One-half or one tablet three or four times daily. Tablets may be chewed or swallowed with liquids.



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(from the Greek *kinetikos*,
to move,
and the Latin *sedatus*,
to calm)

KINESED®
antispasmodic/sedative/antiflatulent

Each *chewable tablet* contains: 16 mg. phenobarbital (warning: may be habit-forming); 0.1 mg. hyoscyamine sulfate; 0.02 mg. atropine sulfate; 0.007 mg. scopolamine hydrobromide; 40 mg. simethicone.

Chuckwalla (*Sauromalus obesus*):
This southwestern desert lizard seeks
shelter in crevices of rocks.
When attempts are made to probe him
from his niche, he gulps air
until his abdomen is distended up to
sixty per cent over its normal size...
thus wedging himself tightly
in place and preventing capture.

(Continued from Page 654)

for infants, but ventilation of babies still requires a constant, 24-hour-a-day vigil by nurses and physicians.

Another area that is being conquered by the nursery is the early diagnosis of infant birth problems. Prior to delivery, a continuous check is made on high risk mothers—including heart rate, amniotic fluid checks, etc.—to determine any problems an infant will have. At birth, the physicians and equipment are standing by at ready, and instant action at birth can save hours of critical work later.

The nursery now has a transportet—a self-contained unit which operates from its own power source and contains resuscitation equipment, heart monitors and other apparatus to help an infant survive—which local ambulance services may use when transporting an ill baby from outlying hospitals to UAB and the High Risk Nursery.

But, according to Dr. Cassady, the nursery is being used for more than just clinical purposes.

Two studies are being carried on at UAB through the nursery: one is looking at poor nutrition in infants, whether caused by an undernourished mother, or a breakdown in

the natural nourishment system to the unborn baby; the other, being carried on in conjunction with the Department of Surgery at the UAB Medical Center, is studying the special requirements for procedures of open-heart surgery on small infants.

The nursery has also entered the field of education and is being used as a tool to educate medical personnel in pediatrics fields. It is used as a training unit for nurses throughout the Southeast, and a recent grant from the Alabama Regional Medical Program will establish an Outreach Nurse training program. These nurses will visit Alabama hospitals which deliver babies in order to evaluate their needs. Then, members of the hospital's staff will come to Birmingham for special training in the High Risk Nursery.

The success of Dr. Cassady's nursery has demanded larger facilities for increased patient loads. Presently construction is underway which will double the infant intensive care facilities, with money coming from Hill-Burton Funds and matching funds from the Robert R. Meyer Foundation.

"Many babies can be saved if they are looked upon, and treated, like what they are—patients," Cassady said. "We do it, and it's working."

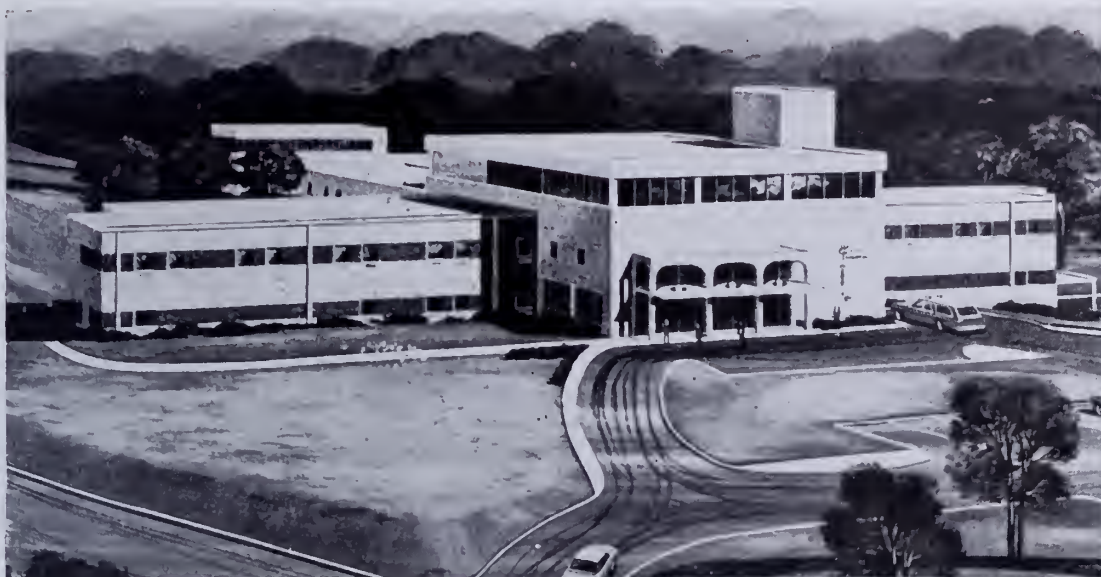
Pertinent Food and Drug Administration Decisions

The Food and Drug Administration ruled that federal regulation and standards are necessary for intra-state blood collection and processing. At present, 3-4,000 centers are not under federal regulation.

The FDA also ruled that products containing more than 0.75 per cent hexachlorophene will be available in the future by prescription only after numerous infant deaths in France were attributed to use of talcum

powder with an abnormally high content of hexachlorophene (up to six per cent.)

Over the next three years the FDA will review the safety and effectiveness of all over-the-counter drugs sold in the United States—between 100,000 and half a million products. The drugs will be classified according to active ingredients and standards published for each class.



Hill Crest HOSPITAL

For Intensive Treatment of Psychiatric Disorders

This 113-bed non-governmental psychiatric hospital provides modern facilities for diagnosis and treatment of patients with all degrees of illness, including those who show severely disturbed behavior. Alcoholic and drug abuse patients are also accepted.

In addition to care by psychiatrists and by consultants in all medical specialties, the treatment program includes occupational, recreational, and physical therapy, social services, and tutoring. Emphasis is on short-term, intensive treatment of voluntary patients.

Hill Crest is a member of: American Hospital Association, National Association of Private Psychiatric Hospital, Alabama Hospital Association, Birmingham Regional Hospital Council.

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F. Joseph Nuckols, M. D.
James A. Greene, M. D.
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ADMINISTRATOR:

Robert V. Sanders

DIRECTOR OF SOCIAL SERVICES:

James T. Kemp, A. C. S. W.

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Hill Crest Foundation, Inc.

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Birmingham, Alabama 35212

PHONE: 205-836-7201

Dietary Metals And Blood Fat Levels

Researchers at the University of Cincinnati Medical Center (UCMC) have established—apparently for the first time—a relationship between blood fat levels and the intake of zinc and copper.

According to the National Society for Medical Research, these studies are presently limited to laboratory rats, but the Cincinnati scientists indicate that their finding hold much significance for man.

Serum lipid (blood fat) levels have been related to atherosclerosis and coronary heart disease in man for some time. Since research is being conducted to find ways of reducing serum lipids in human blood, this finding that dietary levels of zinc and copper can markedly effect lipid levels should add a new dimension to experimental and clinical studies of the relationship between lipids and human cardiovascular disease.

The research team is composed of Drs. Harold G. Petering, Lalitha Murthy and Ellen J. O'Flaherty in the UCMC department of environmental health.

Dr. Petering says, "Perhaps man is particularly vulnerable to increases in cholesterol because he has enough zinc and copper in his body to get good growth, but not enough to forestall high and potentially dangerous levels of blood fat.

In his study, Dr. Petering found that when the body content of zinc and copper is raised, the blood fat levels decrease. Lowering the dietary intake of these metals resulted in a rise of blood fat levels.

People get their dietary zinc through some types of milk and copper through egg yolk. Both metals are to be found in meat.

Earlier studies combined with these more up-to-date findings indicate that there may be some connection between environmental conditions and increases in blood fat levels.

"If man is subjected to certain environmental conditions—such as exposure to a chemical which depresses zinc and copper—he might also get elevated levels of lipids," according to Dr. Petering.

The Cincinnati scientist determined during a early project that exposure of rats to lead or cadmium depresses copper and zinc metabolism. It is possible that exposure of man to these metals as well as to chemicals may depress copper and zinc metabolism, and thus alter normal lipid metabolism. Work will continue in this area to find out what, if any, chemicals will affect lipid levels in the body.

As in all basic research involving animals, care must be taken when attempts are made to apply findings to man. Dr. Petering explains that experiments with research animals being fed a commercially-produced protective diet rich in zinc and copper will not be identical with man's dietary conditions.

However, the Cincinnati study does give some hints about the directions medical science might try in order to find some answer to heart disease and atherosclerosis problems related to high blood fat levels.

Radio Detection Of Cancer

A biophysicist in New York City has developed a technique which allows him to "read" radio signals given off by cell nuclei to distinguish cancerous from non-cancerous animal tissue.

According to the National Society for Medical Research, Dr. Raymond Damadian of the Downstate Medical Center (State University of New York) in Brooklyn has received a \$64,000, three-year grant from the National Cancer Institute to continue research involving human tissue.

The technique, nuclear magnetic resonance (NMR), is based on a law of physics that says when atoms of an element—such as oxygen or hydrogen—are exposed to radio wave lengths specific to the atomic nuclei of that element, the atoms will absorb and emit electromagnetic energy.

In his animal experiments, the biophysicist directed radio waves at tissue placed in a

strong magnetic field. He then measured the time interval between the tissue's absorption of electromagnetic energy and its release.

Dr. Damadian found enough of a difference in time interval so that he has been able to distinguish cancer tissue from non-cancer tissue.

Development of a NMR device for use in clinical studies would allow physicians to detect human tumors quickly and without the elaborate biochemical testing now required.

The grant he has just received will be used by Dr. Damadian to develop such a nuclear magnetic resonance device, and further his research in cataloguing human tumors on the basis of their NMR signals for test tube identification of cancerous tissue.

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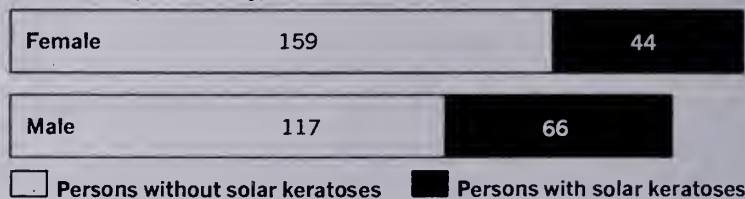
What it means to live and work in Tipton County, Tennessee

**Persons who are white and
over 40 have one chance in four
of having solar keratoses...
which may be premalignant**

An epidemiologic study* conducted in Tipton County, Tennessee, revealed that 28.5% of white persons over 40 had solar keratoses; most had multiple lesions. Cluster sampling projected an estimated prevalence of 32.5% for white males and 19.5% for white females.

Though this is an unusually high percentage of affected persons, these lesions can occur in any white population, wherever people work or play out of doors.

**Prevalence of solar keratoses in white persons
over 40 in Tipton County, Tennessee**



*Data on file, Hoffmann-La Roche Inc., Nutley, New Jersey.



Solar, actinic, senile keratoses

Called by many names, the typical lesion is flat or slightly elevated, brownish or reddish in color, papular, dry, adherent, rough, sharply defined; usually multiple lesions, chiefly on exposed portions of the skin.

Sequence/selectivity of response

Erythema in areas of lesions may begin after several days of therapy; height of reaction usually in affected areas)* usually occurs within two weeks, declining after discontinuation of therapy. Since this response is so predictable, lesions that do not respond should be biopsied to rule out the presence of a frank neoplasm.

Cosmetic results

Cosmetic results are highly favorable. Incidence of scarring is low—important with multiple facial lesions. Efudex should be applied with care near the eyes, nose and mouth.

5% cream—a Roche exclusive

Only Roche formulates the 5% cream... high in patient acceptability... high in clinical efficacy, especially for lesions of hands and forearms... economical.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Multiple actinic or solar keratoses.

Contraindications: Patients with known hypersensitivity to any of its components.

Warnings: If occlusive dressing used, may increase inflammatory reactions in adjacent normal skin. Avoid prolonged exposure to ultraviolet rays. Safe use in pregnancy not established.

Precautions: If applied with fingers, wash hands immediately. Apply with care near eyes, nose and mouth. Lesions failing to respond or recurring should be biopsied.

Adverse Reactions: Local—pain, pruritus, hyperpigmentation and burning at application site most frequent; also dermatitis, scarring, soreness and tenderness. Also reported—insomnia, stomatitis, suppuration, scaling, swelling, irritability, medicinal taste, photosensitivity, lacrimation, leukocytosis, thrombocytopenia, toxic granulation and eosinophilia.

Dosage and Administration: Apply sufficient quantity to cover lesion twice daily with nonmetal applicator or suitable glove. Usual duration of therapy is 2 to 4 weeks.

How Supplied: Solution, 10-ml drop dispensers—containing 2% or 5% fluorouracil on a weight/weight basis, compounded with propylene glycol, tris(hydroxymethyl)amino-methane, hydroxypropyl cellulose, parabens (methyl and propyl) and disodium edetate.

Cream, 25-Gm tubes—containing 5% fluorouracil in a vanishing cream base consisting of white petrolatum, stearyl alcohol, propylene glycol, polysorbate 60 and parabens (methyl and propyl).

an alternative to
conventional therapy
Efudex[®]
(fluorouracil)
cream/solution



Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110



Pinworm therapy is often a family affair



Contraindications: History of hypersensitivity to thiabendazole.

Warnings: If hypersensitivity reactions occur, drug should be discontinued immediately and not resumed. Rarely, erythema multiforme has been associated with thiabendazole therapy; in severe cases (Stevens-Johnson syndrome), fatalities have occurred. Because CNS side effects may occur quite frequently, activities requiring mental alertness should be avoided. Safe use in pregnancy or lactation has not been established.

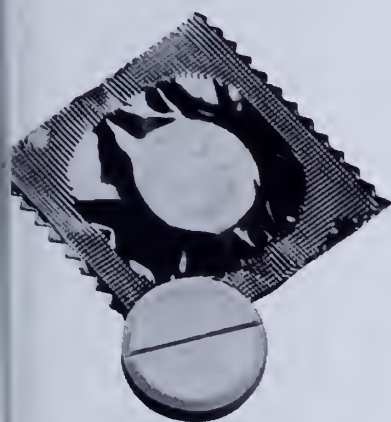
Precautions: Ideally, supportive therapy is indicated for anemic, dehydrated, or malnourished patients prior to initiation of anthelmintic therapy. In presence of hepatic or renal dysfunction,

patients should be carefully monitored.

Adverse Reactions: Most frequently encountered are anorexia, nausea, vomiting, and dizziness. Less frequently, diarrhea, epigastric distress, pruritus, weariness, drowsiness, giddiness, and headache have occurred. Rarely, tinnitus, hyperirritability, numbness, abnormal sensation in eyes, blurring of vision, xanthopsia; hypotension, collapse; enuresis; transient rise in cephalin flocculation and SGOT; perianal rash, cholestasis or parenchymal liver damage; hyperglycemia; transient leukopenia; malodor of the urine, crystalluria, hematuria; appearance of Ascaris in the mouth and nose. Hypersensitivity reactions

A New Dosage Form:

Chewable Tablets 500 mg Mintezol® (THIABENDAZOLE | MSD)



so easy to take
everyone in the family
can keep to the
regimen you prescribe

include: fever, facial flush, chills, conjunctival injection, angioedema, anaphylaxis, skin rashes, erythema multiforme (including Stevens-Johnson syndrome), and lymphadenopathy.
Supplied: Chewable tablets, containing 500 mg thiabendazole, in boxes of 36, strip packaged, individually foil wrapped; suspension, containing 500 mg thiabendazole per 5 cc, in bottles of 120 cc.

For more detailed information, consult your MSD representative or see full prescribing information. Merck Sharp & Dohme, Division of Merck & Co., Inc., West Point, Pa. 19486

INDICATION | DOSAGE SCHEDULE

MINTEZOL® (Thiabendazole, MSD) has demonstrated effectiveness against a broad spectrum of nematode infections. Dosages are weight related. For your convenience, the information in the weight-dose chart below is included in the full prescribing information and in the 1973 edition of PDR.

The recommended maximum daily dose of MINTEZOL is 3 g (6 tablets).

MINTEZOL should be given after meals if possible. Dietary restriction, complementary medications, and cleansing enemas are not needed.

The usual dosage schedule for all conditions is two doses per day. The size of the dose is determined by the patient's weight.

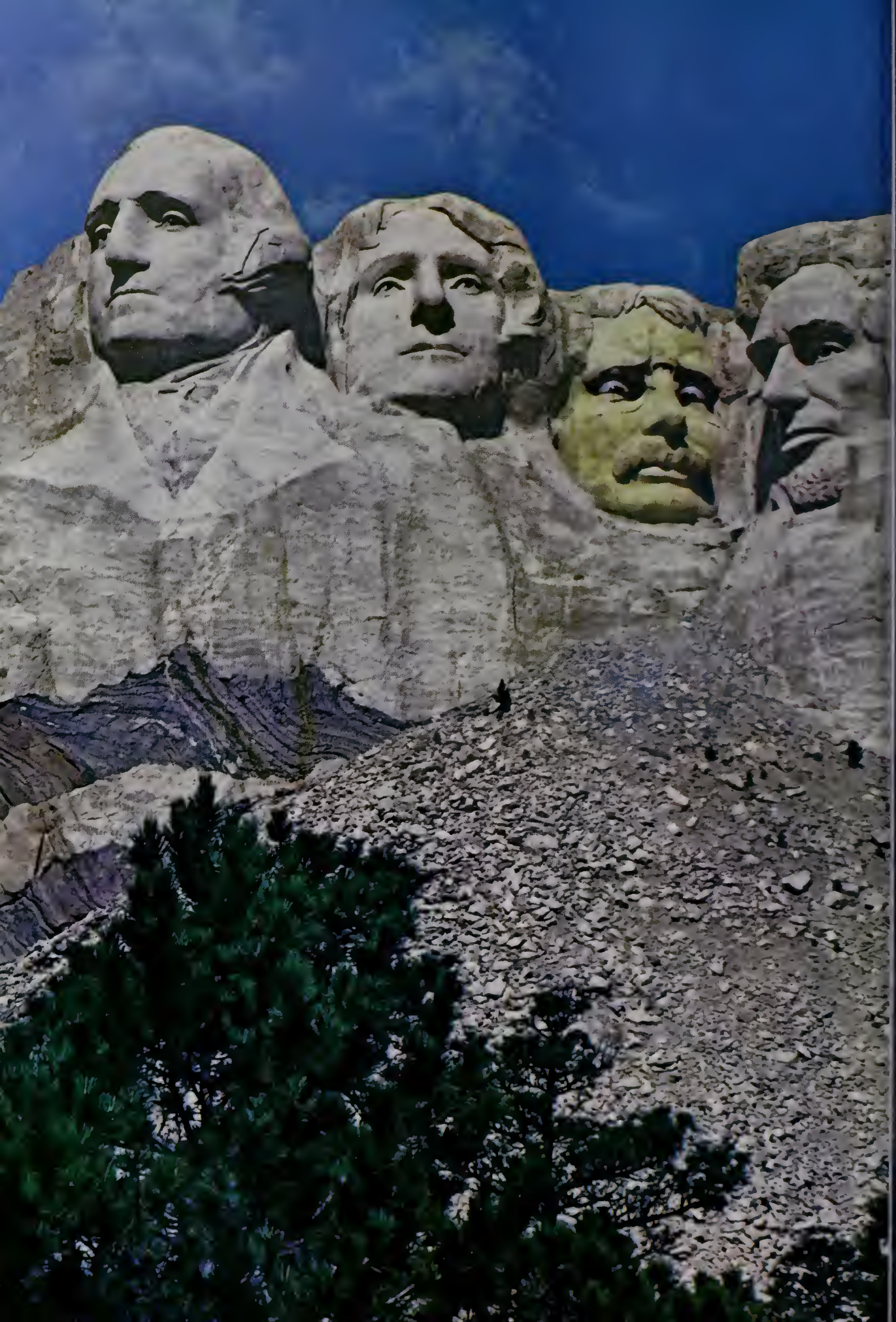
Weight-dose chart:

WEIGHT (lb)	EACH DOSE (g)	TABLETS
25	0.25	½
50	0.5	1
75	0.75	1½
100	1.0	2
125	1.25	2½
150 & over	1.5	3

The regimen for each indication follows:

INDICATION	REGIMEN	COMMENTS
Pinworm disease	Two doses per day for 1 day. Repeat in 7 days. This regimen is designed to reduce the risk of reinfection.	If this is not practical, give 2 doses per day for 2 successive days.
Threadworm,* large roundworm,* hookworm,* and whipworm* disease	Two doses per day for 2 successive days.	A single dose of 20 mg/lb or 50 mg/kg may be employed as an alternative schedule, but a higher incidence of side effects should be expected.
Creeping eruption	Two doses per day for 2 successive days.	If active lesions are still present 2 days after completion of therapy, a second course is recommended.
Symptoms of trichinosis* during the invasive phase of the disease	Two doses per day for 2 to 4 successive days according to the response of the patient.	The optimal dosage for the treatment of trichinosis has not been established.

*Clinical experience with thiabendazole for treatment of each of these conditions in children weighing less than 30 lb has been limited.



Let's make his position perfectly clear...

Antivert[®] (meclizine HCl) for vertigo*

Antivert[®] (meclizine HCl) has been found useful in the management of vertigo associated with diseases affecting the vestibular system. It is available as Antivert (12.5 mg. meclizine HCl) and Antivert/25 (25 mg. meclizine HCl) scored tablets for convenience and flexibility of dosage. Antivert/25 (25 mg. meclizine HCl) Chewable Tablets are also available for the management of nausea, vomiting, and dizziness associated with motion sickness.

INDICATIONS. Based on a review of this drug by the National Academy of Sciences-National Research Council and/or other information, FDA has classified the indications as follows:

Effective: Management of nausea and vomiting and dizziness associated with motion sickness.

Possibly Effective: Management of vertigo associated with diseases affecting the vestibular system.

Final classification of the less than effective indications requires further investigation.

CONTRAINDICATIONS. Administration of Antivert during pregnancy or to women who may become pregnant is contraindicated in view of the teratogenic effect of the drug in rats.

The administration of meclizine to pregnant rats during the 12th-15th day of gestation has produced cleft palate in the offspring. Limited studies using doses of over 100 mg./kg./day in rabbits and 10 mg./kg./day in pigs and monkeys did not show cleft palate. Congeners of meclizine have caused cleft palate in species other than the rat.

Meclizine HCl is contraindicated in individuals who have shown a previous hypersensitivity to it.

WARNINGS. Since drowsiness may, on occasion, occur with use of this drug, patients should be warned of this possibility and cautioned against driving a car or operating dangerous machinery.

Usage in Children: Clinical studies establishing safety and effectiveness in children have not been done; therefore, usage is not recommended in the pediatric age group.

Usage in Pregnancy: See "Contraindications."

ADVERSE REACTIONS. Drowsiness, dry mouth and, on rare occasions, blurred vision have been reported.

ROERIG 
A division of Pfizer Pharmaceuticals
New York, New York 10017

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Clinic Plaza, Suite 4
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New
England
Life

Before deciding to make Valium (diazepam) part of your treatment plan, check on whether or not the patient is presently taking drugs and, if so, what his response has been. Along with the medical and social history, this information can help you determine initial dosage, the possibility of side effects and the ultimate prospects of success or failure.

While Valium can be a most helpful adjunct to your counseling, it should be prescribed only as long as excessive psychic tension persists and should be discontinued when you decide it has accomplished its therapeutic task. In general, when dosage guidelines are followed, Valium is well tolerated (see Dosage). For convenience it is available in 2-mg, 5-mg and 10-mg tablets.

Drowsiness, fatigue and ataxia have been the most commonly reported side effects.

Until response is determined, patients receiving Valium should be cautioned against engaging in hazardous occupations requiring complete mental alertness, such as driving or operating machinery.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

Dosage: Individualize for maximum beneficial effect.

Adults: Tension, anxiety and psychoneurotic states, 2 to 10 mg b.i.d. to q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; adjunctively in skeletal muscle spasm, 2 to 10 mg t.i.d. or q.i.d.; adjunctively in convulsive disorders, 2 to 10 mg b.i.d. to q.i.d. *Geriatric or debilitated patients:* 2 to 2½ mg, 1 or 2 times daily initially, increasing as needed and tolerated. (See Precautions.) **Children:** 1 to 2½ mg t.i.d. or q.i.d. initially, increasing as needed and tolerated (not for use under 6 months).

Supplied: Valium® (diazepam) Tablets, 2 mg, 5 mg and 10 mg; bottles of 100 and 500. All strengths also available in Tel-E-Dose® packages of 1000.



Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110

Valium® (diazepam)

To help you manage excessive psychic tension

THE JOURNAL

of the

Medical Association of the State of Alabama

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acute arthritic inflammation...heat that freezes

In acute rheumatoid arthritis consider Tandearil. The anti-inflammatory action of Tandearil quickly helps reduce heat, pain, swelling, and stiffness. Results are usually seen in 3 or 4 days. Try it for a week when the symptoms defy aspirin control.

Remember that Tandearil is not a simple analgesic. It should not be used on patients responding to routine therapy. Before using, please read the prescribing information. It's summarized below.

Tandearil® helps take the heat off oxyphenbutazone NF Geigy

Tablets of 100 mg.

Important Note: This drug is not a simple analgesic. Do not administer casually. Carefully evaluate patients before starting treatment and keep them under close supervision. Obtain a detailed history, and complete physical and laboratory examination (complete hemogram, urinalysis, etc.) before prescribing and at frequent intervals thereafter. Carefully select patients, avoiding those responsive to routine measures, contraindicated patients or those who cannot be observed frequently. Warn patients not to exceed recommended dosage. Short-term relief of severe symptoms with the smallest possible dosage is the goal of therapy. Dosage should be taken with meals or a full glass of milk. Patients should discontinue the drug and report immediately any sign of: fever, sore throat, oral lesions (symptoms of blood dyscrasia); dyspepsia, epigastric pain, symptoms of anemia, black or tarry stools or other evidence of intestinal ulceration or hemorrhage, skin reactions, significant weight gain or edema. A one-week trial period is adequate. Discontinue in the absence of a favorable response. Restrict treatment periods to one week in patients over sixty.

Indications: Acute gouty arthritis, rheumatoid arthritis, rheumatoid spondylitis.

Contraindications: Children 14 years or less; senile patients; history or symptoms of G.I. inflammation or ulceration including severe, recurrent or persistent dyspepsia; history or presence of drug allergy; blood dyscrasias; renal, hepatic or cardiac dysfunction; hypertension; thyroid disease; systemic edema; stomatitis and salivary gland enlargement due to the drug; polymyalgia rheumatica and temporal arteritis; patients receiving other potent chemotherapeutic agents, or long-term anticoagulant therapy.

Warnings: Age, weight, dosage, duration of therapy, existence of concomitant diseases, and concurrent potent chemotherapy affect incidence of toxic reactions. Carefully instruct and observe the individual patient, especially the aging (forty years and over) who have increased susceptibility to the toxicity of the drug. Use lowest effective dosage. Weigh initially unpredictable benefits against po-

tential risk of severe, even fatal, reactions. The disease condition itself is unaltered by the drug. Use with caution in first trimester of pregnancy and in nursing mothers. Drug may appear in cord blood and breast milk. Serious, even fatal, blood dyscrasias, including aplastic anemia, may occur suddenly despite regular hemograms, and may become manifest days or weeks after cessation of drug. Any significant change in total white count, relative decrease in granulocytes, appearance of immature forms, or fall in hematocrit should signal immediate cessation of therapy and complete hematologic investigation. Unexplained bleeding involving CNS, adrenals, and G.I. tract has occurred. The drug may potentiate action of insulin, sulfonylurea, and sulfonamide-type agents. Carefully observe patients taking these agents. Nontoxic and toxic goiters and myxedema have been reported (the drug reduces iodine uptake by the thyroid). Blurred vision can be a significant toxic symptom worthy of a complete ophthalmological examination. Swelling of ankles or face in patients under sixty may be prevented by reducing dosage. If edema occurs in patients over sixty, discontinue drug.

Precautions: The following should be accomplished at regular intervals: Careful detailed history for disease being treated and detection of earliest signs of adverse reactions; complete physical examination including check of patient's weight; complete weekly (especially for the aging) or an every two week blood check; pertinent laboratory studies. Caution patients about participating in activity requiring alertness and coordination, as driving a car, etc. Cases of leukemia have been reported in patients with a history of short- and long-term therapy. The majority of these patients were over forty. Remember that arthritic-type pains can be the presenting symptom of leukemia.

Adverse Reactions: This is a potent drug; its misuse can lead to serious results. Review detailed information before beginning therapy. Ulcerative esophagitis, acute and reactivated gastric and duodenal ulcer with perforation and hemorrhage, ulceration and perforation of large bowel, occult G.I. bleeding with anemia,

gastritis, epigastric pain, hematemesis, dyspepsia, nausea, vomiting and diarrhea, abdominal distention, agranulocytosis, aplastic anemia, hemolytic anemia, anemia due to blood loss including occult G.I. bleeding, thrombocytopenia, pancytopenia, leukemia, leukopenia, bone marrow depression, sodium and chloride retention, water retention and edema, plasma dilution, respiratory alkalosis, metabolic acidosis, fatal and nonfatal hepatitis (cholestasis may or may not be prominent), petechiae, purpura without thrombocytopenia, toxic pruritus, erythema nodosum, erythema multiforme, Stevens-Johnson syndrome, Lyell's syndrome (toxic necrotizing epidermolysis), exfoliative dermatitis, serum sickness, hypersensitivity angitis (polyarteritis), anaphylactic shock, urticaria, arthralgia, fever, rashes (all allergic reactions require prompt and permanent withdrawal of the drug), proteinuria, hematuria, oliguria, anuria, renal failure with azotemia, glomerulonephritis, acute tubular necrosis, nephrotic syndrome, bilateral renal cortical necrosis, renal stones, ureteral obstruction with uric acid crystals due to uricosuric action of drug, impaired renal function, cardiac decompensation, hypertension, pericarditis, diffuse interstitial myocarditis with muscle necrosis, perivascular granulomata, aggravation of temporal arteritis in patients with polymyalgia rheumatica, optic neuritis, blurred vision, retinal hemorrhage, toxic amblyopia, retinal detachment, hearing loss, hyperglycemia, thyroid hyperplasia, toxic goiter, association of hyperthyroidism and hypothyroidism (causal relationship not established), agitation, confusional states, lethargy; CNS reactions associated with overdosage, including convulsions, euphoria, psychosis, depression, headaches, hallucinations, giddiness, vertigo, coma, hyperventilation, insomnia; ulcerative stomatitis, salivary gland enlargement. (B)98-146-800-F (10/71)

For complete details, including dosage, please see full prescribing information.

GEIGY Pharmaceuticals
Division of CIBA-GEIGY Corporation
Ardley, New York 10502

more than sleep

YOUR CHOICE OF SLEEP MEDICATION
IS WISELY BASED ON MORE THAN
SLEEP-INDUCING POTENTIAL

Sleep with relative safety

Chronic tolerance studies have confirmed the relative safety of Dalmane (flurazepam HCl); no depression of cardiac or respiratory function was noted in patients administered recommended or higher doses for as long as 90 consecutive nights.

In most instances when adverse reactions were reported, they were mild, infrequent and seldom required discontinuance of therapy. Morning "hang-over" with Dalmane has been relatively infrequent. Dizziness, drowsiness, lightheadedness and the like have been the side effects noted most frequently, particularly in the elderly and debilitated. (An initial dose of Dalmane 15 mg should be prescribed for these patients.)

Sleep for 7 to 8 hours without need to repeat dosage during the night

No sleep medication has been as rigorously evaluated in the sleep research laboratory as Dalmane. Insomnia patients given one 30-mg capsule of Dalmane (flurazepam HCl) at bedtime, on average: fell asleep within 17 minutes, had fewer night-time awakenings, spent less time awake after sleep onset, and slept for 7 to 8 hours with no need to repeat dosage during the night.

Sleep with consistency— no waning of therapeutic effectiveness

Over multiple nights of therapy, no waning of drug effectiveness was noted. There was consequently no need to increase dosage during the study periods. It stands to reason that the fewer repeat or incremental doses needed to sustain sleep, the lower the total cost of the sleep medication. Consistent effectiveness is the measure of Dalmane (flurazepam HCl) economy.

When your evaluation of insomnia indicates the need for a sleep medication, consider Dalmane—a single entity nonnarcotic, nonbarbiturate agent proved effective and relatively safe for relief of insomnia.

DALMANE[®]

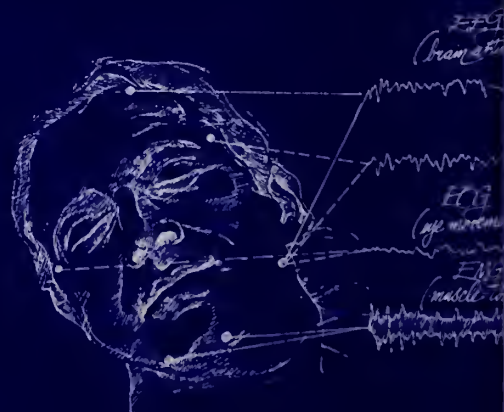
(flurazepam HCl)

When restful sleep is indicated

One 30-mg capsule *h.s.*—usual adult dosage.
One 15-mg capsule *h.s.*—initial dosage
for elderly or debilitated patients.

ROCHE

ROCHE LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110



Before prescribing Dalmane (flurazepam HCl), please consult Complete Product Information, a summary of which follows:

Indications: Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening; in patients with recurring insomnia or poor sleeping habits; and in acute or chronic medical situations requiring restful sleep. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or

recommended.

Contraindications: Known hypersensitivity to flurazepam HCl.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Use in women who are or may become pregnant only when potential benefits have been weighed against possible hazards. Not recommended for use in persons under 15 years

of age. Though physical and psychological dependence have not been reported, recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated patients, initial dosage should be limited to 15 mg to preclude oversedation, dizziness, or ataxia. If combined with other drugs having hypnotic or CNS-depressant effects, consider potential additive effects. Employ usual precautions in patients who are severely depressed, or with



depression or suicidal tendencies. Periodic blood counts and liver and kidney function tests are advised during prolonged therapy. Observe usual precautions in presence of impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia, falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and possibly indicative of drug intolerance or overdosage, have been reported.

Also reported were headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech,

confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase. Paradoxical reactions, e.g., excitement, stimulation and hyperactivity, have also been reported in rare instances.

Dosage: Individualize for maximum beneficial effect. *Adults:* 30 mg usual dosage; 15 mg may suffice in some patients.

Elderly or debilitated patients: 15 mg initially until response is determined.

Supplied: Capsules containing 15 mg or 30 mg flurazepam HCl.

He won't resist feeling better with **Mylanta[®]**

Because the taste is good.

- ☐ promptly relieves hyperacidity
- ☐ also relieves fullness and bloating
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President's Page

Public Relations

In my opinion if the private practice of medicine is to survive, organized medicine must exert a tremendous effort in that heretofore neglected field of public relations.

Even though through Peer Review and self-regulation our profession becomes so respected that we are beyond reproach, if we allow the mass news media to continue to portray medicine in an unfavorable light a majority of the public will eventually lose faith in the private practice of medicine. When this is brought about the fee-for-service concept of the private practice of medicine will be abolished through one means or another.

Congress is influenced by propaganda arrayed against our present system of medical care, as is the general public. By far a large part of the mail which a congressman receives is critical of our present system of medical care. The vast majority of the public who are satisfied do not write, nor do they appear before congressional hearings.

By passage of the Bennett amendment establishing PSRO's the Congress showed that it had lost faith in the ethical commitments of our profession. We must accept this. It is law. But, we will be faced with other regulations if we do not find a more effective means of influencing Congress.

What can we in Alabama do now? We all have a group of patients, perhaps small, who show toward us their utmost confidence and respect. We can take advantage of this. We



DR. PHILLIPPI

can ask each of them to write his congressman telling what he thinks of his present medical care. He can say that his physician is competent, that he is compassionate, that his fees are reasonable and that he is not getting rich, that he has no 40-hour work week, but is available 24 hours a day, seven days a week. Congressmen do not get such correspondence.

I am asking that our Central Office write each of you and ask that you supply them with the names of approximately ten patients whom you think would react favorably to such a request. The Central Office will then write each of the patients asking each to write his congressman.

A handwritten signature in dark ink, appearing to read "Frank M. Phillippi, Jr." The signature is fluid and cursive, with a large initial "F" and "P".

Frank M. Phillippi, Jr., M. D.

The Woman's Auxiliary

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AUXILIARY PLEDGE

"I pledge my loyalty and devotion to the Woman's Auxiliary to the American Medical Association. I will support its activities, protect its reputation and ever sustain its high ideals."

This final *Journal* message brings to a close 50 years of State Auxiliary history. Serving as the 45th president has been an experience of lasting value. I am proud to be a part of this first 50 years and am looking forward to being part of the next 50 years. You are probably thinking this can not happen. I must admit my chances are slim, but not impossible. The possibility came to mind today as I was talking with 90 year old Mrs. Wilbur Salter of Anniston. She was the eleventh State President, serving in 1938-39. She stated that the only thing that kept her from being active in every phase of Auxiliary work today was her inability to drive. This is the kind of spirit I have felt as I visited 25 of the 38 county Auxiliaries this year.

As we look back at the past 50 years, we find many other women like Mrs. Salter. On April 29, 1923 at the Battle House in Mobile, 23 women met for the purpose of organizing The Woman's Auxiliary to the Medical Association of the State of Alabama. Mrs. Seale Harris of Birmingham was the organizing chairman and became the first president. Just the year before she had helped organize the National Auxiliary, and then became its second president. Mrs. William Thuss, Sr. of Birmingham is another one of these women. She served as State president in 1955-56 and as National president in 1962-63. This year Mrs. Thuss was named Birmingham's Woman of the Year, and she is still very active in local and state Auxiliary work. Mrs. John Chenault of Decatur served as state president in 1954-55 and as national president in 1969-70. She is presently serving as a national AMPAC director. Mrs. Ben Johnson, Jr. of Bessemer was state president in 1969-70 and has been serving as national AMAERF chair-



MRS. HANSBERRY

man for the past two years. We are looking forward to having that fourth national president.

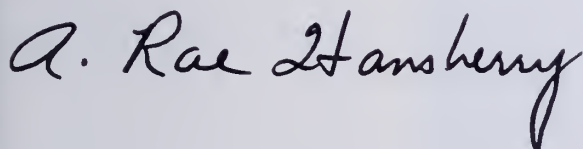
This Auxiliary year began with 1558 members, and we are now close to a 1600 membership goal. This is approximately two-thirds of the potential, and represents 39 counties and 19 members-at-large. We will continue to work toward a 100 per cent membership and will be trying to organize those other 28 counties. The doctors can be a big help in this effort. Does your wife belong to the Auxiliary? If there is no county Auxiliary she can be a member-at-large by paying \$8 to the State Treasurer, Mrs. J. P. Brooke, 112 Waverly Circle, Bessemer 35052. With this membership she will be placed on all mail-

ing lists of the State and National Auxiliaries.

There are still a few doctors and their wives who have a skeptical attitude about the Auxiliary. They ask "What is the Auxiliary"? "What does the Auxiliary really do"? Through these 12 journal articles this year, I have tried to tell our story or answer these questions. The purpose has been the same these 50 years—that of assisting the Medical Profession in its program for the advancement of medicine and public health, and promoting good fellowship among physicians' families.

We need your help in telling the Auxiliary story. I encourage you to find out what your local Auxiliary is doing. A good way to do this is to invite your county Auxiliary president to give a year-end report at one of your medical society meetings.

I appreciate your interest and the encouragement you have given me this year. You have made me feel a part of your group.



A. Rae Hansberry
President

Medical Consent Law For Minors Proposed

A model law which would give doctors the right to treat certain minors—including those seeking treatment for pregnancy, venereal disease, and alcohol or drug abuse—without the consent of their parents or guardians has been proposed by the American Academy of Pediatrics' Committee on Youth.

The model act, "drafted with the purpose of stimulating all states of the union to review their statutes in regard to minors' consent for health services," appeared in the February issue of Pediatrics, the AAP's monthly scientific journal.

Medical Briefs

A pacemaker, as most people know, is an electrical device implanted in a heart patient to regulate his heart beat. Now, Canadian physicians have devised a pacemaker to straighten the spine. It is designed to, hopefully, correct the curved spine condition known as scoliosis, which affects mainly young girls. The spinal pacemaker sends out impulses which put the muscles controlling the vertebrae into intermittent spasms, forcing them into normal alignment, said Dr. Walter Bobechko of the Hospital for Sick Children in Toronto. The device has been tested successfully in animals.

Scientists at the National Institutes of Health have found a way to grow living animal cells to a density resembling natural body tissue. Current methods allow many types of human and animal cells to be grown in the laboratory, but they stop growing at concentrations much lower than that of tissue. The new method uses an "artificial circulatory network," similar to blood vessels which supplies continuous nourishment. The scientists plan to use the technique to study cancer. By altering hormones and other ingredients in the fluid that feeds the cells, they will study conditions which promote or retard the growth of various kinds of cancer tissue.

It has long been known that many of those parents who abuse their children were themselves abused and neglected. Could the friendship of a motherly type help such parents break the abuse syndrome? St. Luke's Hospital in New York City recently announced it would try to find out in a new program. Elderly women who volunteer are to visit troubled mothers and talk with them, acting as "friends" rather than official case workers. A similar project in Colorado reportedly had some success.



Forensic Medicine - An Alabama Need

We, in medicine, especially in academic settings, have been accused, sometimes rightly, of being too insular and more concerned with our own interests than those more directly affecting the public at large. Current societal needs dictate growing concern and participation in matters outside our traditional spheres. Recent examples of such involvement include Regional Medical Programs, environmental control programs, development of Health Maintenance Organizations and other activities at community, state, regional, and national levels; this necessitates extension and commitment of activities traditionally found in hospitals and medical centers with those affecting other segments of society. One such area long neglected in Alabama is the medico-legal interface, specifically forensic medicine including forensic pathology. There is great need for improvement of our medico-legal investigative system to provide for an adequate mechanism for the medical investigation of the cause and manner of death in the public interest.

Of more than passing interest is the fact that in jurisdictions having an optimal investigative system and sufficient resources as many as 20 per cent of all deaths require official investigations and about half of these deaths are followed by an official autopsy. The value of such investigations and forensic autopsies is evident where appropriate legislation and financial support provide for a modern medico-legal investigative system. For example, identification of the cause and manner of sudden and unexpected death might reveal that the individual died by homicide, suicide, or by accident. This could help identify an unrecognized murder or

some other crime. On the other hand it might exonerate an individual suspected of some criminal act. In addition to the usual benefits of autopsies, such studies provide for continuous monitoring of conditions, especially those in our environment, which produce death in our society. This permits earlier recognition of new diseases such as death resulting from drugs or physical abuse, changing patterns of disease, and early identification of infectious conditions for which preventive measures can be taken. Such autopsies contribute importantly to our educational programs in that they often represent a "natural" death in an individual whose condition has not been modified greatly by time or medical treatment. In a recent article in the *New England Journal of Medicine*, Professor William J. Curran emphasizes the growing importance of such investigations in the 1970's and identifies the following new problems: increase in violent death, greater difficulty in determining the cause of death in drug use and drug abuse cases, polarization of political activity and resort to violence in protest movements, such as the Attica prison riot, and growing distrust and hostility toward the American system of justice and law enforcement.

What is the situation in Alabama? There is in our state a unique medico-legal investigative system combining the activities of the office of coroner with those of the State Department of Toxicology and Criminal Investigation. The Code of Alabama, with the single exception of Jefferson County, provides for the election of coroners based on the county unit. Since no professional or technical qualifications are usually required

(Continued on Page 682)



Placidyl®
(ETHCHLORVYNOL)

Brief Summary

Indications—Placidyl (ethchlorvynol) is indicated for short-term hypnotic therapy in the management of insomnia.

Contraindications—Drug hypersensitivity and porphyria.

Warnings—Not recommended during the first and second trimester of pregnancy. Caution patients with possible combined exaggerated effects with alcohol, barbiturates, tranquilizers or other CNS depressants. Exaggerated effects might result in blurring of vision, paralysis of accommodation and profound hypnosis. Caution patients concerning driving a motor vehicle, operating machinery, or other hazardous operations requiring alertness while taking the drug. ADMINISTER WITH CAUTION TO PATIENTS WITH SUICIDAL TENDENCIES AND DO NOT PRESCRIBE LARGE QUANTITIES OF THE DRUG. Adjustment of the dosage of oral anticoagulants might be necessary when beginning ethchlorvynol therapy, during therapy, or after stopping therapy. This drug is not recommended for use in children. PLACIDYL HAS THE POTENTIAL FOR THE DEVELOPMENT OF PSYCHOLOGICAL AND PHYSICAL DEPENDENCE. INSTANCES OF SEVERE WITHDRAWAL SYMPTOMS, INCLUDING CONVULSIONS AND DELIRIUM CLINICALLY SIMILAR TO THOSE SEEN WITH BARBITURATES, HAVE BEEN REPORTED IN PATIENTS TAKING REGULAR DOSES AS LOW AS 1000 MG. PER DAY OVER A PERIOD OF TIME WHEN THE DRUG WAS SUDDENLY DISCONTINUED. PROLONGED ADMINISTRATION OF THE DRUG IS NOT RECOMMENDED. Addiction-prone patients or those who are likely to increase dosages of the drug on their own initiative should be observed for evidence of signs or symptoms which may indicate possible physical withdrawal or abstinence symptoms. Signs and symptoms associated with withdrawal and abstinence include unusual anxiety, tremor, ataxia, slurring of speech, memory loss, perceptual distortions, irritability, agitation and delirium. Other well defined signs and symptoms, not necessarily due to withdrawal and abstinence, may include anorexia, nausea or vomiting, weakness, dizziness, sweating, muscle twitching and weight loss. Abrupt discontinuance of Placidyl following prolonged overdosage may result in convulsions and delirium.

Precautions—Toxic amblyopia has been reported with long-term continuous use of ethchlorvynol. Permanent visual defects have been observed, although amblyopia has improved after discontinuance of the drug. Drug dosage should be limited in elderly and debilitated patients to the smallest effective amount. If pain is present, this drug should only be given if insomnia persists after pain is controlled with analgesics. Caution is advised in prescribing the drug for patients who are being treated with either MAO inhibitors or antidepressants. Transient delirium has been reported with the combination of Placidyl and amitriptyline. Drug dosage should be reduced if prescribed for patients receiving MAO inhibitors or antidepressants. Caution should be exercised in patients with impaired hepatic or renal function. Patients do not respond unpredictably to barbiturates or alcohol or who exhibit excitement and release of inhibition in association with such agents, may also react in this way to Placidyl. Rarely, patients may exhibit symptoms suggestive of an unusual susceptibility to the drug; such as prolonged hypnosis, profound muscular weakness, excitement, hysteria, syncope without marked hypotension. Transient dizziness or ataxia may occur.

Adverse Reactions—Hypotension, nausea or vomiting, gastric upset, aftertaste, blurring of vision, numbness, facial numbness, and allergic reaction manifested by urticaria have been reported following Placidyl administration. Mild "hangover" and symptoms of mild excitation have occurred in some patients. There have been rare reports of cholestatic jaundice occurring in patients taking ethchlorvynol. A few cases of thrombocytopenia have been reported in patients receiving ethchlorvynol. 304431

Give us his nights.

Prescribe Placidyl. Chances are, we'll give him a good night's sleep.

Insomnia may often accompany surgical convalescence. During those long nights following surgery, sleep can be as elusive as it is vital.

When sleep is synonymous with therapy, remember . . . Placidyl is synonymous with sleep. It has been for over 17 years.

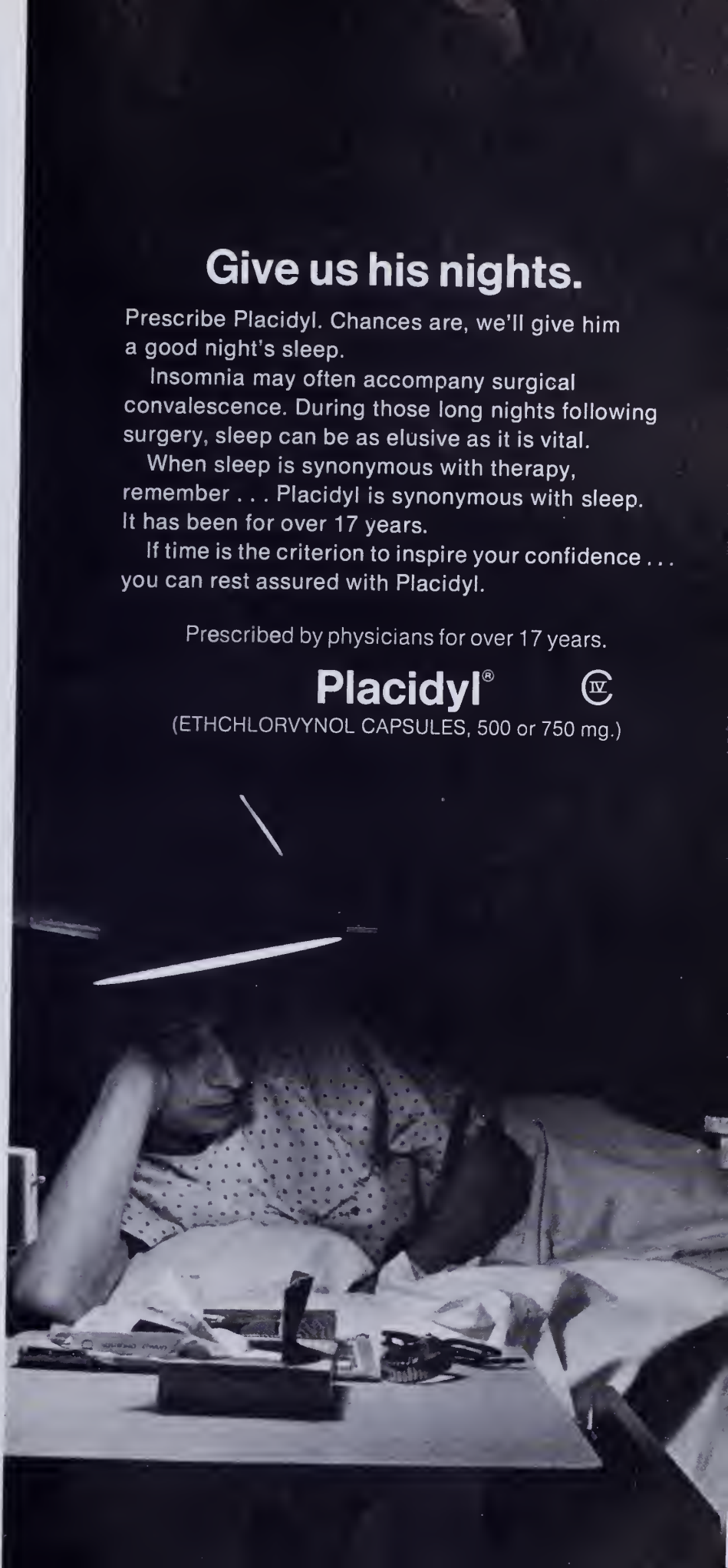
If time is the criterion to inspire your confidence . . . you can rest assured with Placidyl.

Prescribed by physicians for over 17 years.

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(ETHCHLORVYNOL CAPSULES, 500 or 750 mg.)



When irritable colon feels like this



... **KINESED®** provides more complete relief.

Gastroenteritis, colitis, gastritis or duodenitis can produce spasm or hypermotility, gas distention and discomfort. But Kinesed can provide a balanced formulation to relieve these symptoms:

- ☐ belladonna alkaloids—for the hyperactive bowel
- ☐ simethicone—for accompanying distention and pain due to gas
- ☐ phenobarbital—for associated anxiety and tension

Contraindications: Hypersensitivity to barbiturates or belladonna alkaloids, glaucoma, advanced renal or hepatic disease.

Precautions: Administer with caution to patients with incipient glaucoma, bladder neck obstruction or urinary bladder atony. Prolonged use of barbiturates may be habit-forming.

Side effects: Blurred vision, dry mouth, dysuria, and other

atropine-like side effects may occur at high doses, but are only rarely noted at recommended dosages.

Dosage: *Adults:* One or two tablets three or four times daily. Dosage can be adjusted depending on diagnosis and severity of symptoms.

Children 2 to 12 years: One-half or one tablet three or four times daily. Tablets may be chewed or swallowed with liquids.



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(from the Greek *kinetikos*,
to move,
and the Latin *sedatus*,
to calm)

KINESED®

antispasmodic/sedative/antiflatulent

Each *chewable tablet* contains: 16 mg. phenobarbital (warning: may be habit-forming); 0.1 mg. hyoscyamine sulfate; 0.02 mg. atropine sulfate; 0.007 mg. scopolamine hydrobromide; 40 mg. simethicone.

Chuckwalla (*Sauromalus obesus*):
This southwestern desert lizard seeks
shelter in crevices of rocks.
When attempts are made to probe him
from his niche, he gulps air
until his abdomen is distended up to
sixty per cent over its normal size...
thus wedging himself tightly
in place and preventing capture.

(Continued from Page 678)

it is not surprising to find a wide variety of occupations among lay coroners. Of 71 coroners in Alabama in 1969, there were 36 funeral directors, 4 sheriffs, 3 insurance salesmen, 2 attorneys, 2 veterinarians, 2 car salesmen, several others including a housewife, a chiropractor, a barber, and 11 having no stated occupation. There were 5 physician coroners, a matter of local option in several larger counties including Mobile and Montgomery. It seems clear that no matter how public spirited or dedicated these lay coroners are they are in no real way qualified to serve the public knowledgeably or effectively in medico-legal investigations of the dead. Regrettable also is that legislation providing for the State Department of Toxicology and Criminal Investigation requires no professional qualifications and does not provide for medical representation. This department studies less than 1.5 per cent of deaths in the state each year. Autopsies are performed by non-physicians under its jurisdiction, a unique situation in the entire United States. Though valuable toxicologic studies are done in this department under the able leadership of the State Toxicologist, these investigations are no substitute for other medical and pathologic studies so central to a modern investigative system.

It is obvious, then, that we have laymen and others responsible for these investigations for whom no medical qualifications are required by law and that physicians and pathologists are involved indirectly or peripherally, if at all. This is not the fault of those who serve often with dedication but is the result of inadequate and archaic legislation.

The many deficiencies of our present system have been well documented by a survey conducted in 1957 by Professor Coleman B. Ransome, Jr. of the University of Alabama; by several graduate theses, the most recent (1971) by Robert L. Potts of the Harvard Law School, and by a number of articles written by individuals expert in medico-legal


matters. Most of these authors propose that the coroner's office in Alabama should be abolished or substantially modified. Optimally they recommend its replacement by a statewide medico-legal system headed by a highly qualified physician who is trained both in pathology and forensic pathology and designated Medical Examiner.

Alabama is one of 13 states still retaining elective lay coroners in most counties and is one of only 10 states that has made no serious effort to change this system. Mr. Richard Childs, for many years the distinguished Executive Director of the National Municipal League, has identified Alabama as being among the few states in which murder can be most easily committed without being recognized as such. Our Legislature has not provided the effective legal framework necessary to attract medico-legal pathologists into the existing system in this state. Also, there is no effective method of utilizing the services of the many pathologists now practicing in Alabama.

How are these problems being met in other states? As long ago as 1877 Massachusetts abolished the office of coroner and replaced it with a medical examiner who was required to be a licensed physician. The City of New York set up its now renowned medical examiner's system in 1918. The Chief Medical Examiner, appointed by the Mayor, is required to be a physician and a skilled pathologist holding permanent tenure. Dr. Milton Helpern, currently in this position, is perhaps the world's most distinguished and best known forensic pathologist and heads one of the most outstanding medico-legal investigative systems in the world. Virginia and Maryland have the most effective state medical examiner systems in the south and perhaps the nation. During the decade, 1960-70, 27 states in varying degrees improved their laws dealing with these medico-legal matters, leaving only 10, of which we are one, having no improvement of their laws to better meet these societal needs.

(Continued on Page 684)

The Rx that says "Relax"



BUTISOL Sodium provides highly predictable sedative effect: minor dosage adjustments are usually all that's needed to produce the desired degree of sedation. (With 3 dosage forms and 4 strengths to make adjustments easy.)

BUTISOL Sodium offers prompt, smooth, relatively non-cumulative action: begins to work within 30 minutes... yet, because of its intermediate rate of metabolism, generally has neither a "roller-coaster" nor a "hangover" effect.

BUTISOL Sodium is remarkably well tolerated: a 30-year safety record assures you that there is little likelihood of unexpected reactions.

BUTISOL Sodium saves your patients money: costs less than half as much as most commonly prescribed sedative tranquilizers.*

These are four good reasons for prescribing BUTISOL Sodium for the many patients who need to have the pace set just a little slower. Its gentle daytime sedative action is often all that's needed to help the usually well-adjusted patient cope with temporary stress.

*Based on surveys of average daily prescription costs.

Butisol SODIUM[®]
(SODIUM BUTABARBITAL)

Contraindications: Porphyria, sensitivity to barbiturates, or susceptibility to dependence on sedative-hypnotics. **Warning:** May be habit forming. **Precautions:** Exercise caution in: moderate to severe hepatic disease; withdrawal in drug dependence or the taking of excessive doses over a long period, to avoid withdrawal symptoms; elderly or debilitated patients, to avoid possible marked excitement or depression; use with alcohol or other CNS depressants, because of combined effects. **Adverse Reactions:** Drowsiness at daytime sedative dose levels, skin rashes, "hangover" and gastrointestinal disturbances are seldom seen. **Usual Adult Dosage:** For daytime sedation, 15 mg. to 30 mg. t.i.d. or q.i.d. For hypnosis, 50 mg. to 100 mg. **Available as:** Tablets, 15 mg., 30 mg., 50 mg., 100 mg.; Elixir, 30 mg. per 5 cc. (alcohol 7%). BUTICAPS[®] [Capsules BUTISOL SODIUM (sodium butabarbital)] 15 mg., 30 mg., 50 mg., 100 mg.

McNEIL

McNeil Laboratories, Inc., Fort Washington, Pa. 19034

(Continued from Page 682)

What should we do in Alabama? New legislation will be required to provide for a modern medico-legal system. Considerable interest was expressed by the Chief Justice of the Supreme Court of Alabama and a legislative subcommittee has been appointed. This group is engaged in hearings dealing with this problem and efforts are underway to develop new legislative proposals to meet this need. It is in the public interest that medical, legal, and public support be enlisted to provide for the introduction and enactment of adequate medico-legal legislation. Such legislation desirably should be patterned after "A Model Medico-Legal Investigation System" as recommended by the National Municipal League and so eloquently espoused by Mr. Childs. Any new investigative program must be adequately financed and should provide for a statewide system having its headquarters in close proximity to a teaching hospital and medical school for reasons of mutual support and benefit. Experts in many fields of medicine, dentistry, and the sciences found in such

academic communities are able to contribute importantly to these investigations. Regional offices should be established and all offices coordinated with those of the State Department of Toxicology and Criminal Investigation. It is essential that medical examiners and pathologists heading such a system should be individuals having the highest professional qualifications in medicine, pathology and, desirably, law.

This system, recommended to investigate sudden and unexpected death, is worthy of continuing public support because it can provide the necessary mechanism to ascertain and establish accurately, reliably, economically, and quickly the cause and manner of public interest deaths. It will add the now lacking medical expertise so necessary for an effective investigative program. Such a system allows the dead to speak, telling of the cause and manner of death—thus protecting the rights of the dead and serving the interests of the living.

Charles H. Lupton, Jr., M. D.
Professor and Chairman
Department of Pathology

"Psychiatric Emergencies"—A Medical Educational Film

Sandoz Pharmaceuticals, East Hanover, N. J., has announced the release of a new medical educational film: "The Psychiatric Emergency . . . therapy, discharge, after-care." by Ronald C. Smith, M. D. Associate Clinical Professor of Psychiatry, University of Southern California School of Medicine, Los Angeles, California.

This is a 17-minute color film about three patients at the Brea Hospital Neuropsychiatric Center, Brea, California, admitted in states of psychiatric emergency typical of most admissions from the community in institutions of this kind.

Survival Kit To Decrease Coronary Deaths Discussed

Dr. Stanley J. Sarnoff, President of Survival Technology, Inc., today told the 22nd annual scientific session of the American College of Cardiology that "The number of sudden deaths resulting from heart attacks might be appreciably reduced if the patient has an automatic device for self-injecting atropine, an automatic device for self-injecting lidocaine, and a third device, no larger than a pack of cigarettes, with which he can instantly transmit his electro cardiogram by telephone to his physician." This system is presently under study in patients with heart attacks at major medical centers internationally.



**Who
killed
the
wicked
itch**

(and the infection)*
?

snow white
Sporostacin Cream

TRADEMARK

(chlordantoin 1% and benzalkonium chloride 0.05%)

After you write your prescription for two tubes of soothing, fungicidal Sporostacin Cream, tell your patient not to be fooled by the quick relief of symptoms it affords. Make sure she knows how to use it as directed—for the *full* 14-day course of therapy. Then, on follow-up, you'll usually find that nonstaining, easy-to-use Sporostacin Cream has finished off vulvovaginal candidiasis in the nicest possible way.

two tubes...two weeks



*

Indication: Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indication as follows:

"Probably" effective: For the treatment of vulvovaginal candidiasis.

Final classification of the less-than-effective indications requires further investigation.

Contraindications: None known. **Precautions:** Cases of sensitization and irritation have been reported. When noted the drug should be discontinued. **Dosage:** One applicatorful intravaginally twice daily for a period of 14 days. Course of therapy may be repeated if necessary.

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PHYSICIAN PLACEMENT SERVICE IN ALABAMA

The Physician Placement Service of the Medical Association of the State of Alabama is designed to assist both physicians and communities. MASA members having knowledge of practice opportunities or wishing to relocate their own practices are urged to communicate with the Placement Service. For further information: write Mr. Emmett Wyatt, Executive Assistant, Medical Association of the State of Alabama, 19 South Jackson Street, Montgomery, Alabama 36104, or Telephone 263-6441.

Locations Wanted

Anesthesiology—

Age 54; Medical College of Alabama, 1949; Board certified; seeking associate or institutional practice. LW-2/9

Age 46; King's College Hospital, London, England 1952; Board certified; seeking solo or group practice. LW-2/10

General Practice—

Age 27; Univ. of Tennessee, 1970; seeking group practice; Available July 1973. LW-3/1

Age 31; University of Kansas, 1966; seeking associate or group practice; Available July 1973. LW-3/2

Age 32; University of Texas, Southwestern, 1968; seeking institutional practice; Available January 1973. LW-3/3

Age 45; University of Alabama, 1963; Available July 1973. LW-3/9

Age 31; St. Louis University, 1966; National Board; seeking associate practice. LW-3/10

Age 32; University of Missouri, 1965; National Board; Board eligible, 1974; seeking solo, associate or group practice; Available Spring of 1973.

Internal Medicine—

Age 31; University of Miami, 1964; Board certified, seeking group or institutional practice. Available January 1973. LW-4/7

Age 30; Univ. of Virginia, 1967; Board eligible; seeking group practice; Available June 30, 1973. LW-4/15

Age 30; Vanderbilt University, 1967; National Board; Board eligible; seeking solo, associate, or group practice; Available July, 1973. LW-4/16

Age 34; Georgetown University, 1964; Board certified; seeking group, associate or institutional practice; Available July 1973. LW-4/18

Age 40; University of Kentucky, 1969; Board eligible; seeking solo, associate, group or institutional practice; Available July 1973. LW-4/19

Age 32; Temple University, 1966; National Board, Board eligible; seeking group practice; Available late summer 1973. LW-4/19

Age 38, Ohio State University, 1963; National Board, Board eligible; seeking group or institutional practice; Available September, 1973. LW-4/22

Age 31; Vanderbilt University, 1967; National Board, Board eligible; seeking associate or group practice; Available July 1973. LW-4/23

Neurology

Age 30; Northwestern University, 1967; National Board; Board eligible; seeking solo, associate, or group practice; Available June 1973. LW-5/1

Age 28; University of Pennsylvania, 1969; National Board, Board eligible; seeking associate or group practice. LW-5/6

Ophthalmology—

Age 31; Chicago Medical School, 1966; National Board; seeking associate or group practice; Available July, 1973. LW-6/6

Age 31; Bowman Gray, 1967; Board eligible; seeking solo, associate or group practice; Available June 30, 1973. LW-6/10

Age 31; S.U.N.Y., Downstate Medical School 1966; National Board, Board certified; seeking solo or group practice; Available July 1973. LW-6/19

Orthopedic Surgery—

Age 31; University of Alabama, 1966; National Board; Available July, 1973. LW-14/4

Age 31; Baylor, 1966; Board eligible; seeking associate practice; available July, 1973. LW-14/5

Age 30; University of Illinois, 1967; Board eligible; seeking group or associate practice; Available June 1974. LW-14/8

Age 34; University of Michigan, 1964; Board eligible; seeking solo, associate, group or industrial practice; Available January 1974. LW-14/20

Age 32; Emory University, 1966; Board eligible; seeking associate or group practice; Available August 1973. LW-14/21

Otolaryngology—

Age 30; Medical College of Georgia, 1966; Board certified; seeking solo, associate or group practice; Available summer, 1973. LW-16/3

Age 30; Creighton Medical College, 1966; National Board, Board certified; seeking solo, associate or group practice; Available July 1973. LW-16/4

Pathology—

Age 32; Bowman Gray School of Medicine, 1965; Board certified; seeking Hospital practice with or without associate. LW-8/12

Pediatrics

Age 30; Kansas University, 1968; National Board, Board eligible; seeking associate or group practice; Available August 1973. LW-9/9

Radiology—

Age 43; Univ. of Tennessee, 1962; Available July 1, 1973. LW-10/10

Surgery—

Age 33; University of Maryland, 1965; seeking solo, group, or associate practice; Available July 1973. LW-11/7

Age 35; Univ. of Oklahoma, 1964; Board eligible; seeking associate or group practice; Available Jan. 1, 1973. LW-11/14

Age 42; Tulane University, 1955; Board certified; seeking associate, group or industrial practice; Available January 1973. LW-11/16

Urology—

Age 35; Univ. of Miami, 1964; National Board; Board eligible; seeking associate, group, or institutional practice; Available Jan. 1973. LW-12/5

Age 32; University of Kentucky, 1968; Board eligible; seeking solo, Associate or group practice; Available July 1973. LW-12/8

Age 32; University of South Carolina, 1966; Board eligible; seeking associate or group practice; Available August 1973. LW-12/9

Physicians Wanted

Special Openings—

Wanted, qualified physicians in either OB-GYN, Internal Medicine, or Thoracic Vascular Surgery, to practice with group clinic. The clinic is a 16 man multi-specialty group, and is located in a city of 35,000 with a trade area of 160,000. Excellent recreational facilities and educational opportunities in the area. PW-14

Opportunity for Internist, Board Certified or eligible, interested in Cardiology, in town of 11,000 population—service area 40,000—south Alabama. Modern 86-Bed (JCAH) general hospital with 8-Bed Combination Intensive and Coronary Care Unit under construction. Seven GP's, Certified Surgeon, Radiologist—excellent city school system. PW-15

Internists—one or two needed in University town of 40,000 plus population in Southeast Alabama—Young vigorous multi-specialty group—Generous initial salary and early partnership. PW-16

Internists, Board-certified or eligible. One needed now and another in 1 or 2 years. For early partnership with internist in south Alabama city of 40,000 plus population. New office building adjacent to 181-bed hospital. Practice largely hospital in-patient and Cardiology. PW-21

Opportunity for a Board certified or eligible surgeon to be associated with a Board surgeon in city of 150,000 population. PW-21/1

General Practitioner or Internist for associate or separate practice in Birmingham. Modern office space and excellent hospital facilities. PW-26

Internist wanted, Board certified, Town of 10,000 population, Southwest Alabama. New 51-bed general hospital, I.C.U. Physicians: 5 GP's, Certified Surgeon and Radiologist. Within easy access, excellent fresh and salt water fishing, hunting including deer and turkey. Public and private schools. One hour drive from two metropolitan areas. PW-18

Wanted, internists, generalists, radiologist, orthopedist, general surgeons, town of 15,000 population in county of 45,000 population in southeast Alabama. Attractive for a group setup. High income area and marked scarcity of physicians. Excellent schools and recreational facilities. Newly expanded hospital. PW-17

Wanted: Immediately. Pediatrician to replace recently deceased partner in northeast Alabama. Enter busy practice in a predominantly GP area. Enjoy rural, quiet living with nearby scenic and recreational facilities. Salary, practice, everything negotiable. PW-19

(Continued on Page 742)

**What's
on your
patient's
face...**

**may be more important than
his chief complaint**

The lesions on his face may be solar/actinic — so-called “senile” keratoses...and they may be premalignant.

Solar, actinic or senile keratoses

These lesions may be called by several names, but they usually can be identified by the following characteristics: the typical lesion is flat or slightly elevated, of a brownish or reddish color, papular, dry, rough, adherent, and sharply defined. They commonly occur as multiple lesions, chiefly on the exposed portions of the skin.



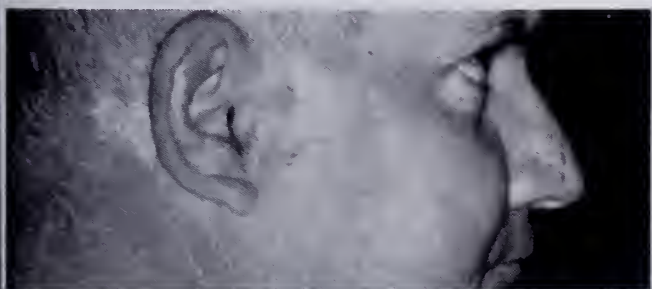
Patient P.T. seen on 3/29/67 shows typical lesions of moderately severe keratoses. Note residual scarring on ridge of nose from previous cryosurgical and electro-surgical procedures.*

Sequence of therapy/ selectivity of response

After several days of therapy with Efudex® (fluorouracil), erythema may begin to appear in the area of the lesions; the reaction usually reaches its height of unsightliness and discomfort within two weeks, declining after discontinuation of therapy. This reaction occurs in affected areas. Since the response is so predictable, lesions that do not respond should be biopsied.

Acceptable results

Treatment with Efudex provides highly favorable cosmetic results. Incidence of scarring is low. This is particularly important with multiple facial lesions. Efudex should be applied with care near the eyes, nose and mouth.



Patient P.T. seen on 6/12/67, seven weeks after discontinuation of 5%-FU cream. Reaction has subsided. Residual scarring not seen except for that due to prior surgery. Inflammation has cleared and face is clear of keratotic lesions.*

Data on file, Hoffmann-La Roche Inc., Nutley, N.J.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Multiple actinic or solar keratoses.

Contraindications: Patients with known hypersensitivity to any of its components.

Warnings: If occlusive dressing used, may increase inflammatory reactions in adjacent normal skin. Avoid prolonged exposure to ultraviolet rays. Safe use in pregnancy not established.

Precautions: If applied with fingers, wash hands immediately. Apply with care near eyes, nose and mouth. Lesions failing to respond or recurring should be biopsied.

Adverse Reactions: Local — pain, pruritus, hyperpigmentation and burning at application site most frequent; also dermatitis, scarring, soreness and tenderness. Also reported — insomnia, stomatitis, suppuration, scaling, swelling, irritability, medicinal taste, photosensitivity, lacrimation, leukocytosis, thrombocytopenia, toxic granulation and eosinophilia.

Dosage and Administration: Apply sufficient quantity to cover lesion twice daily with non-metal applicator or suitable glove. Usual duration of therapy is 2 to 4 weeks.

How Supplied: Solution, 10-ml drop dispensers — containing 2% or 5% fluorouracil on a weight/weight basis, compounded with propylene glycol, tris(hydroxymethyl)aminomethane, hydroxypropyl cellulose, parabens (methyl and propyl) and disodium edetate.

Cream, 25-Gm tubes — containing 5% fluorouracil in a vanishing cream base consisting of white petrolatum, stearyl alcohol, propylene glycol, polysorbate 60 and parabens (methyl and propyl).

This patient's lesions
were resolved with

Efudex® (fluorouracil)

5% cream/solution
...a Roche exclusive



Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110

Artificial Blood Keeps Rats Alive

In a Boston laboratory, several deathly pale rats are living normal lives with nothing in their veins but a milky white synthetic solution. The solution has kept them alive and functioning for as long as a week, while their bodies manufacture new blood to replace the blood that has been previously removed.

The solution, does not even come close to performing all of the functions of real blood, but it does perform one of the most vital functions—carrying oxygen to the body's cells. The solution is composed principally of Fluorocarbons—a member of the family of heat resistant substances—used in the production of non-stick frying pans. This artificial blood has the enormous capacity of absorbing and releasing oxygen and other dissolved gasses.

According to the National Society for Medical Research, Dr. Robert P. Geyer of Harvard University, has been experimenting with this synthetic blood as a possible solution to the constant demand for disease free whole blood. The artificial blood can be produced in large quantities cheaply and stored indefinitely.

Though it will probably be years before it will be tested on humans, scientists feel that the potential for medical uses is great enough to justify continued experimentation.

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PRESCRIBING INFORMATION Antiminth (pyrantel pamoate) Oral Suspension

Actions. Antiminth (pyrantel pamoate) has demonstrated anthelmintic activity against *Enterobius vermicularis* (pinworm) and *Ascaris lumbricoides* (roundworm). The anthelmintic action is probably due to the neuromuscular blocking property of the drug.

Antiminth is partially absorbed after an oral dose. Plasma levels of unchanged drug are low. Peak levels (0.05-0.13 µg/ml.) are reached in 1-3 hours. Quantities greater than 50% of administered drug are excreted in feces as the unchanged form, whereas only 7% or less of the dose is found in urine as the unchanged form of the drug and its metabolites.

Indications. For the treatment of ascariasis (roundworm infection) and enterobiasis (pinworm infection).

Warnings. *Usage in Pregnancy:* Reproduction studies have been performed in animals and there was no evidence of propensity for harm to the fetus. The relevance to the human is not known.

There is no experience in pregnant women who have received this drug.

Precautions. Minor transient elevations of SGOT have occurred in a small percentage of patients. Therefore, this drug should be used with caution in patients with pre-existing liver dysfunction.

Adverse Reactions. The most frequently encountered adverse reactions are related to the gastrointestinal system.

Gastrointestinal and hepatic reactions: anorexia, nausea, vomiting, gastralgia, abdominal cramps, diarrhea and tenesmus, transient elevation of SGOT.

CNS reactions: headache, dizziness, drowsiness, and insomnia. Skin reactions: rashes.

Dosage and Administration. *Children and Adults:* Antiminth Oral Suspension (50 mg. of pyrantel base/ml.) should be administered in a single dose of 11 mg. of pyrantel base per kg. of body weight (or 5 mg./lb.); maximum total dose 1 gram. This corresponds to a simplified dosage regimen of 1 cc. of Antiminth per 10 lb. of body weight. (One teaspoonful = 5 cc.)

Antiminth (pyrantel pamoate) Oral Suspension may be administered without regard to ingestion of food or time of day; and purging is not necessary prior to, during, or after therapy. It may be taken with milk or fruit juices. Because of limited data on repeated doses, no recommendations can be made.

How Supplied. Antiminth is available as a pleasant tasting caramel-flavored suspension which contains the equivalent of 50 mg. pyrantel base per ml., supplied in 60 cc. bottles.

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Control and Prevention of Tuberculosis

Frederick S. Wolf, M. D.

Montgomery, Alabama

I have enjoyed this meeting with you to discuss diseases of the chest. The invitation was most welcome because we feel in Alabama that we have made tremendous strides in the control and prevention of tuberculosis in our residents. In my biographical sketch I made the point that tuberculosis was a most interesting disease, and interesting it is.

The ability of the organism to invade a host as an aerosol by inhalation, to remain within the skin—lupus vulgaris—and to produce the tuberculous chancre as reported after ritual circumcision are remarkable evidence of a potent pathogen. The replication of the organism at the site of invasion with both lymphatic and hematogenous spread lead to generalized seeding of every organ system. Historically, the host has been able to limit the progress of the disease. The manner of this accomplishment has been and remains a subject of great interest to pathologist and immunologist. Of importance to public health is the resultant "resting" stage. The host may exist through a normal life span with no untoward symptoms; the host may find the invader awake, actively destroying tissue at any point in his life. Yet so vague are the symptoms that medical intervention is not sought.

The tubercle bacillus is a complex organism. Through its protein constituents sensitization of the infected individual oc-

curs. Challenge by a purified and biologically constant protein derivative, tuberculin, will elicit a measurable response. As with all allergic reactions, this will rise and fall in intensity and tend to decline in intensity with the aging of the individual.

There are those who say the disease begins and ends in man. This is not quite so because the organism is capable of invading warm-blooded animals and certainly it is well known to all of you that cattle are prolific distributors of tubercle bacilli as are certain of the smaller animals. The tubercle bacilli are not easily grown outside of the body. In random cultures of material obtained the first thing in the morning, either voluntarily or by induction, a yield of 70 per cent positive cultures is exceedingly good. Years ago, without sputum induction, in active tuberculosis, positive cultures approached 100 per cent with daily sputum samples. The older Lowenstein Jensen medium has always been accepted as a standard. No growth after eight weeks is considered negative. Middlebrook several years ago introduced a medium which was alleged to produce a much more rapid growth of the organism, such that at the end of three weeks no growth could be considered negative. The laboratory of the State of Alabama which does some 60 to 70,000 cultures annually has not had this experience since on split samples there is a deficit of between 15 to 20 per cent between the Middlebrook and the Lowenstein Jensen medium.

The modern concept of epidemiology in

This paper was presented at the Lee A. Barnes Cardiopulmonary Symposium, Tuskegee, Alabama on November 10, 1972

tuberculosis is based on comparatively recent work, especially the exquisite experiment of Riley with his penthouse and air conduction which demonstrated once and for all that tuberculosis is primarily an airborne disease. This has been an essential point since prior to Riley's work the concept of fomites for the transmission of tuberculosis had resulted in some rather bizarre hospital procedures. For the present the argument rages as to whether this is an endogenous or exogenous disease. The weight of current literature is towards endogenous reinfection. This, of course, is part of the problem based upon the ability of the organism to go into a resting stage for long periods of time. The two leading articles on this subject, really classic papers, entitled "The Age Selection of Mortality for Tuberculosis in Successive Decades" in 1939 and more recently the Danish report, "The Epidemiological Basis of the Eradication of Tuberculosis in An Advanced Country," are introduced in support of the endogenous reinfection concept.

In 1959 the Arden House Conference indicated that approximately 75 per cent of the new active tuberculosis disease would occur in the succeeding five years due to endogenous reinfection. As tuberculosis morbidity declines, it is obvious then that endogenous infection plays a more preponderant role.

In some heavily infected areas, perhaps Alabama, the possibility of exogenous infection must also be considered. Epidemiologically then, the individual invaded and infected by the tubercle bacillus is a carrier, a potential spreader of the disease, throughout his lifetime because the tubercle bacilli remain alive and capable of, for lack of a better term, reactivation.

Since the objectives of any tuberculosis control program must be to maintain a community free of infection, free of tuberculosis throughout its lifetime, to find those who have already been invaded by the tubercle bacilli, and to prevent the activation of tu-

berculous disease in that population, the Alabama program makes use of its knowledge of the epidemiology of the disease and the peculiar attributes of the tubercle bacillus to develop control. Since we have agreed that the disease must be spread from one individual to another, how do we find open infectious cases?

This is most difficult, and is truly the most alarming part of any control program. Alarming because when individuals with active disease do seek medical assistance, they have over many, many years presented themselves with far advanced or moderately advanced disease which has been shedding tubercle bacilli over long time periods. As you know, this is a slowly evolving disease. The invader makes every effort to preserve the host, its sole source of support. Usually the symptoms fail to alarm the host. Only as the organism assumes control does the patient feel the need for medical aid. Oftentimes the professional knowledge necessary to diagnose tuberculosis is unavailable. Knowing these active cases then, it is possible to go back into the family group to determine what other individuals in that household, in that place of employment, are involved with the disease, that is, by the use of the tuberculin test to find such infected individuals.

Several years ago our program discontinued the photoroentgenogram because its ability to show us active disease is extremely limited and terrifically expensive. However, where a positive tuberculin is found, we immediately obtain a 14 x 17 film. We find that this is far more productive and so relatively less expensive. A second course of seeking active disease is to reverse this. For this purpose we tuberculin test large numbers of people in the range of 200,000 annually for several purposes. One is to determine the age specific rate of tuberculin reactors and the second is, of course, to have a positive reactor lead us, especially in children of school age or younger, into an open case. Thus we work backwards but always with our stress on tuberculins.

For the purpose of reading tuberculin, we consider ten millimeters or greater a definite positive. However, we do not hesitate to X-ray all individuals of five millimeters or above, that is, the five to nine millimeter group, because we found that this lower-sized reaction could well be the result of the aging process in the older groups and an early reaction in a relatively young person.

More must be said on this. During the six months, January-June 1972, there were 451 reported cases of active tuberculous disease in Alabama. From these cases 2,424 household and non-household contacts were identified. Of these somewhat over 90 per cent were examined. As a result, 41 individuals were found with active disease—included in the 451 total; 660 persons had “positive” tuberculin reactions; and a total of 1,061 people were started on prophylaxis.

5.37	Contact Index
94.1%	Contacts Examined
35.4%	Household Contacts Infected
22.3%	Non-Household Contacts Infected
69.0%	Household Contacts Placed on Pro
28.60	Yield Active Cases Per 1000 Household Contacts Examined
7.09	Yield Active Cases Per 1000 Non-Household Contacts Examined

The published reports of the Public Health Service field trials by Comstock, Ferrebee (now Woolpert), and others provide the rationale for Alabama’s prophylactic program. The most recent report indicates that those who take isoniazid will have a reduction in incidence of 89 per cent as reported in the Archives of Environmental Health for November 1972.

By law all school employees are required to receive a triennial X-ray for tuberculosis. By action of the State Committee of Public Health a more modern approach has been adopted. All school employees are tu-

berculin tested. The negative reactors are retested annually. The positive reactors are recommended Isoniazid for a year and an annual X-ray. With the inception of this approach to school employees, we have, thus far, avoided a school mini-epidemic.

A word about these primary reactors, the relatively young people who are recent converters, or elderly people for that matter who are recent converters. We have had the interesting experience of doing voluntary sputum cultures on such individuals and to our surprise, rightly or wrongly, these recent converters have demonstrated positive cultures in the absence of X-ray findings of disease. For this reason we have raised the question of whether these recent converters could not very well be a source of infection to not only other children but to adults in the same household. The question then becomes, “Is this a vicious cycle which will be repeated ad infinitum?”

One of the arguments given against this is that the number of organisms being put out in the recent converter’s sputum are relatively few. This, of course, is a playback to the Riley paper in which he demonstrated that one organism in 10,000 cubic feet of air was sufficient to infect an animal. We don’t have an answer. We make no pretense of such a contribution to the legends of tuberculosis. Having found an infected individual who is asymptomatic through a positive tuberculin, what do we do?

For these individuals with an allegedly normal chest or evidence of healed pulmonary disease without antimicrobial therapy, we recommend a twelve months’ course of Isoniazid, 300 mg. daily, preferably in one dose but divided if need be. The ability of Isoniazid to penetrate tissue even into the center of a caseous mass is the reason for Isoniazid being used in prophylaxis. Not only is it amazingly effective but it is relatively innocuous and certainly the least expensive of all TB drugs. Thus far we have placed more than 50,000 people on prophylactic Isoniazid. In this group we are very

pleased to report that we have had 94 cases of active disease develop, which sounds pretty bad, but of these 94 only eight took a full 12 months' course of prescriptions, whether they took the drug or not we never know, all we can say from our records is that we gave the patient a month's supply of Isoniazid for 12 months. We have penalized this program statistically by not waiting for an X-ray report but instead issue the first 30 days of medication immediately upon reading the tuberculin test so that some of these individuals may actually have had active disease at the time of the first prescription or even the second if there is a delay in reading the film.

When we analyze these 94 patients, the amazing and perhaps prideful result is that we find the historical picture has been completely reversed. Primary and minimal disease is present in 52 per cent of these people and 48 per cent show moderately advanced disease and no far advanced disease as compared with the 70 to 75 per cent moderately to far advanced historically found in individuals on original diagnosis.

What is to be done with the individual with active disease? Here the argument rages furiously across the country; at least, there is a vociferous group saying that there is no need to hospitalize any of these people any longer. Medication is sufficient. There is another group which is ultra conservative, if you will, that says these individuals should be hospitalized until they have consecutive negative cultures, and a third group which says some hospitalization is necessary but not as long as the conservatives require.

Those who say that no hospitalization is necessary are playing a numbers game. Their approach is that with effective medication there is a sharp reduction in the number of organisms being brought out as an aerosol for distribution. Therefore, the individual rapidly becomes less infectious so that with a negative smear, even though the culture is positive, these people are relatively harmless. Personally, I don't like this

word "relatively" because if you believe that the disease is a result of invasion by virulent organisms, then infection can occur anywhere at any time with any individual.

In hospitalized patients the trend is to shorten the hospital stay and this does have some laboratory validity because we have found in our institutions long before comparable work was published—incidentally, our group is not a particularly prolific group in presenting data—we found the specimen taken at the ninth week, 63 days, 52 per cent of our hospitalized patients had become bacteriologically negative and remained that way throughout the remainder of their hospital stay and into their outpatient program. To be minimally conservative and maximally effective, we can safely discharge our patients at ten weeks, 70 days, and have some 70 to 75 per cent of them bacteriologically negative at hospital discharge. This percentage of negativity does not have any relationship to the extent of the disease at the time the patient is admitted to the hospital. These far advanced, minimal, or moderate, whichever they happen to be at the time they came in, consecutive admissions.

Where should these people be treated? This, of course, is dependent upon factors beyond the control of Alabama's control program or any other state's control program. It is dependent upon the depth of knowledge and skill of the individual medical practitioner. What is his knowledge of current therapy? What has he learned in practice? What was the basis of his training in this obnoxious, infectious disease? Medical schools do not teach tuberculosis. This is considered by the average medical school as simply another infectious disease—forget it! It is in almost the same situation as venereal disease education and training in medical schools.

To produce in each area of Alabama some single physician who would have more expertise in tuberculosis than his colleagues,

in fact, a man who might be considered a "pulmonary specialist," I put these words in quotes, has been an objective of our outpatient program. Early in the game we went out to each county medical society to solicit a volunteer from this group of physicians to attend our outpatient TB clinics. In the area of the State in which this has been most successful, that is, the recruiting has been most successful, there the reduction in the rate of newly found active disease has shown the greatest reduction. These general practitioners, these surgeons, these pediatricians, these radiologists, have learned a little bit about clinical tuberculosis. They do not, of course, treat primary or originally infected cases with Rifampin alone, they do not treat with PAS alone, they use multiple drugs. If the patient fails to respond to that group of drugs, they shift, not one at a time but again with multiple drugs. Equally important, the patients know and trust these physicians. The patients return to clinics as requested so that the progress of their disease can be evaluated. In areas such as these, the treatment of active tuberculosis in general hospitals is of great potential. We feel that the closer you can retain patients to home, the better for that patient's well-being and progress. Without some knowledge of tuberculosis and its proper treatment, the handling of these patients in every general hospital becomes extremely difficult.

We have taken as yet no position on general hospital treatment for tuberculosis and this, in time, will be required of us. Then I believe our position will be that if the individual who is handling the patient knows and understands the treatment of the disease, well and good.

There is a potential risk to other employees of the hospital. Under proper and adequate therapy, the danger of known infection is rapidly reduced almost to zero, in fact, to considerably less than the risk of infection by the undiagnosed case of tuberculosis. Interestingly enough, it is quite possible by review of hospital records to find

that tuberculosis was diagnosed as an afterthought by the attending physician and certainly the tuberculin conversion rate of hospital staffs is greater in a general hospital than it is in a hospital specializing in tuberculosis.

The measurement of the success or failure of any medical program is difficult. Especially is this difficult in long-standing, minimally symptomatic, active tuberculous disease. Against the standards of the Surgeon General's Ad Hoc Committee and the most recent American Thoracic Society standards, our program consistently equals or exceeds all published standards except one. Only in the use of prophylaxis do we fail to achieve the recommended percentage of completed medication. Annually our age specific tuberculin reactor rates are lower. This is greater in the older age groups than in the younger.

No paper on the control of tuberculosis would be complete without a respectful word or two to the general field of public health and certainly to those veterinarians who have been associated with public health.

The veterinarians long years ago developed and demonstrated that tuberculous cattle spread *M. tuberculosis*, niacin positive, to humans. Today, the presence of tuberculin positive cattle in milk herds is extremely low. It does occur, but in Alabama with relative infrequency. The second great step forward was the development of Pasteurization. Pasteurization destroys the tubercle bacillus and eliminates this possible source of infection.

Many years ago the "Do Not Spit On The Sidewalk" signs, even though we were not fully aware of the aerosol as the spreader of tuberculosis, did much to break the chain of infection. The organism does not live long dry or exposed to sunlight. The sanitization of patients in tuberculosis sanatoria further broke the chain of infection. To these pioneers we owe a debt of gratitude and to the pharmaceutical industry a fur-

ther debt. From them came the many excellent drugs now available in the treatment of this disease. Surely in the years to come even more effective medicants will be available to our profession, drugs which will destroy the organism without destroying the patient.

And this is our present position in the Alabama Tuberculosis Program.

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Advertising Of Educational Toys Called "Misleading"

While educational toys for preschool children frequently are safe, pleasant and attractive, the advertising that promotes such toys and "learning environments" can be "guilt-producing, misleading, and potentially destructive of human development and values," the American Academy of Pediatrics' Committee on Infant and Preschool Child has said.

In a statement appearing as a supplement to a recent issue of the AAP's *Newsletter*, the committee said that "although the importance of early learning cannot be contested, there is no evidence to suggest that any specific set of toys, systems, or environments is necessary, sufficient, or desirable to learning."

The committee also pointed out "that playing with children is important, that a variety of playthings is important, and that common household objects may be as adequate for use as developmental toys as the special products so advertised."

Advertising that promotes "toys that teach" must be considered deceptive, the committee said, when:

- It implies or says that parents who do not buy or use such toys are not meeting their children's needs, or at least not meeting them with the "margin of safety" such toys supposedly provide.

- It implies or says that a manufactured device can be an adequate substitute for direct parent-child interaction.

- It says or implies that there are critical periods in a child's development when learning is almost effortless, and such products will assure that these critical periods are exploited.

- It says or implies that results of research done on institutionalized children can be applied to children reared in "normal" home situations. Toys that enhance the development of children in severely depriving environments cannot be assumed to enhance the development of children in normal environments, the committee said.

"Most educational toys manufactured by reputable firms are attractive and do appeal to children who are ready to learn," committee chairman William B. Forsyth, M. D., F. A. A. P., said in an interview. "These firms do not need guilt-producing promotional campaigns to sell high quality children's toys.

"Since there is no proven scientific basis for the misleading claims of a minority of products, those who do claim that use of their product will provide a specific educational or developmental advantage should be suspect by parents and pediatricians alike."

The A, B, C's of Mechanical Ventilation

Part III

Monitoring Ventilation and Blood Gases

D. S. Tysinger, Jr., M. D.

Dothan, Alabama

In Part I and II, basic air flow and ventilation was discussed. It was pointed out that the patient should be ventilated to maintain pH and PCO_2 . If oxygen partial pressure is not sufficient at this point, then the respiratory mixture should be enriched until oxygen partial pressures are between 70 to 150 mmHg. This level is aimed for because as oxygen partial pressures drop below 60 to 55 mmHg, hypoxic changes rapidly develop. Above 200 mmHg., vasoconstriction, reduced tissue-oxygen transport, increased blood pressure, decreased cardiac output, fatal cardiac arrhythmias, tissue metabolic acidosis secondary to anerobic metabolism and all the other signs of oxygen toxicity begin to develop.

What is desired is normalizing of the arterial blood gases. The unit to measure and use for evaluation of adequacy of results then should be arterial blood gases. Obtain blood gas as often as necessary to be sure the ventilatory effort is satisfactory.

Arterial puncture and blood gas analysis is sound, safe and simple. It can easily be done by trained technicians. Where frequent samples may be needed an arterial line with a plastic intracath, a three-way stopcock and arterial drip of saline, xylocaine and heparin is quite effective in providing rapidly obtainable arterial sampling. Such lines can be put in percutaneously. Cut downs get infected. Such lines can be left in up to two weeks without complications.

Those who are against using blood gases directly to evaluate ventilatory effort usually in final analysis do not know how to interpret and apply them to the patient. If an individual does not know how to handle and use blood gas reports, he should not be

trying to ventilate the patient. If he is using ventilatory equipment that he cannot vary to correct abnormal blood gases, he is using the wrong equipment. A pressure-cycled, flow rate controlled machine that will produce up to 50 cmH₂O pressure on inspiration and that will produce up to 5 cmH₂O vacuum on expiration can be adjusted to ventilate any patient that can be ventilated. The operator who cannot ventilate with such equipment does not know how to ventilate a patient.

Many things have been proposed in the field of intensive mechanical ventilation in an effort to assure adequacy. Most are frantic productions of frustrated people. They see blood gases going to pot and they use equipment which in many instances is far less than adequate so they need something else to hang onto. They have developed a fetish about monitoring secondary things seemingly not knowing how to correct the blood gases.

Too often the old axiom, if a little is good, a lot must be better, is applied. Look how long it took for man to learn that too much oxygen is usually worse than no oxygen at all. The chronological history of mechanical breathing equipment is developed around enough pressure to cause ventilation and enough volume to assure all that could possibly be needed if the patient was exerting to maximum effort. The first equipment to be widely tried other than the "iron lung" was very high fixed flow rate pressure-cycled machines. The flow rate is so high and turbulent buildup of pressure in the lung bottleneck is so rapid, very poor ventilation occurs. One-hundred 1/min. flow is 1.667/sec at 15 x's/min. with an 1-E ratio of 1:2, this would be 1.3 sec.

inspiratory or 2.222 l/breath. These machines usually have a primary flow of about 50 l/min. with only primary flow this would be 1.111 l/breath, even without venturi intrainment. To cause this kind of flow rate to pass through the trachea it takes 40 to 45 cmH₂O pressure. These machines had pressures set at lower levels usually 15 to 20 cmH₂O. Thus, only the volume flow that could be delivered at these levels was actually developed and this for only a fraction of a second. The remainder was used up in tracheal turbulence and obstruction which produced rapid pressure buildups and machine recycling.

This high flow rate pressure-cycled machine became very popular and still is the most popular machine among less educated (inhalation therapy wise) parts of the country. Because of the high flow rates and pressures it will not deliver medication. With side arm nebulization it could not deliver medication if it could get it past the trachea. Worse, it cannot adequately ventilate the normal apneic patient much less the diseased lung. Because of the failure of this archaic resuscitator and its widespread usage and the inability of its users to understand or admit it did not work, a better method was looked for. This method was found unfortunately in the volume limited, time-cycled machines (so-called volume-cycled machines).

With volume limited timed-cycled machines the operator can limit the amount he pushes down the patient in a given period of time. The high flow rates are reduced more to what the trachea can handle. The use of this equipment, despite all the fancy knobs and frills, is still only a barbaric improvement over the high fixed flow pressure-cycled machines. These machines look for and hopefully produce the pressure necessary to deliver that part of the fixed volume not used up in compression to cause pressure. The compression area is the volume set plus the miles of tubing plus the patient tubing and the patient's functional

residual volume. They add up to a sizable volume. Delivery volumes are relative since a side arm nebulizer puts in 100 to 200 cc/sec. at 50 PSI continuously in addition to the preset volume. The user gets more spastic when this great machine does not also correct blood gases. He begins to put blood gas monitoring down and goes to measuring anything and everything he can to prove to himself he is still in control and his machines work. He measures volume delivered (which is not correct because it is both that compressed and delivered). (Compressed gas is measured as flow.) He wants to insure adequate ventilation. He monitors expiratory gases. He usually spends three times as much money as necessary on one of these so-called volume-cycled machines and monitoring equipment as it would cost to get good blood gas monitoring equipment and the proper respirator to do the job. He tells everyone this is the best and the way it ought to be done. If everyone is as educatedly ignorant on the subject as he is, it probably will be best for them too. It is not adequate however for an operator of breathing equipment who knows what he is doing.

One of the common misconceptions in inhalation therapy exist here. The beliefs that volume limited timed-cycled machines deliver the volume set and that volume limited timed-cycled machines compensate for changing lung compliance is a fairy tale. Anyone who believes this machine will compensate for changing lung compliance shows an extreme lack of knowledge about mechanical ventilators and mechanical ventilation. The volume set is used up in compression (that expanded in producing pressure) and the remainder is volume delivered. The higher the pressure the more compressed and the less that is delivered. The changing pressures do not mean the volume is being delivered at that pressure. It means that the higher the pressure, the smaller the ventilated space and the smaller the ventilated volumes. Monitoring tidal volumes

tells one nothing, only blood gases tell the adequacy of ventilation. No machine compensates for compliance changes. Only a knowledgeable educated operator can compensate for compliance changes and he must do this by controlling flow rate and pressure. The volume limited timed-cycled machine is not the answer to ventilation problems. Those who think they are only show a gross lack of knowledge on the subject.

The first purpose in mechanical ventilation is to maintain pH by controlling CO_2 . The second is to maintain oxygen partial pressures. In following a bleeding patient a physician would be considered negligent to try to control hemoglobin and hematocrit by checking only the nailbeds and the insides of the lower eyelids. If he did not follow hemoglobin and hematocrit levels closely it could be disastrous. Likewise, when a patient is being mechanically ventilated there is no substitute for and no excuse for not following blood gases closely. If these cannot be followed, the institute should not attempt mechanical ventilation on any basis other than a temporary emergency. If the operator of equipment cannot maintain blood gases, either he does not know how, he is using inefficient equipment, or the patient cannot be ventilated.

To repeat for emphasis—"a pressure-cycled, flow rate controlled machine that will produce 50 cmH_2O pressure on inspiration and 3 to 5 cmH_2O vacuum on expiration under the supervision of a trained individual will ventilate anyone that can be ventilated." The hardest problem is to take over where stiff lungs have been produced by too high oxygen partial pressures and too high pressures produced by the cumbersome volume-cycled equipment or the educated hand and too high volume delivery of small particulate water one micron and under that go to the aveolus and denature surfactant causing alveolar atelectasis and hydration problems. With meticulous handling most of these can be improved by switching to proper equip-

ment, proper pressures and proper oxygen levels.

With pressure-cycled flow rate controlled equipment, (1) proper pressures and flow rates can be set to deliver any reasonable tidal volume. (2) With the expiratory retard cap, end expiratory pressures can be made positive. This increases functional residual volume. (3) With expiratory vacuum functional residual volume can be reduced. Thus, tidal volume and functional residual volume can be controlled within the limits of clinical need. (4) With a vacuum expiratory phase the circulation can be assisted by ventilation in shocky states. (5) With continuous positive pressures pulmonary edema due to left heart over load and failure can be reversed. Also, with this technique pulmonary sequestration due to left heart failure can be reversed. (6) With a high flow oxygen blender added to the circuit inspiratory oxygen partial pressures can be controlled to within \pm or $-$ 2%. This is the most effective and efficient system to date. Everything that needs to be controlled is controlled. (7) The only other requirement is an educated and understanding human brain (the operator) to vary the various factors necessary to control PCO_2 and keep pH stable and give adequate PO_2 levels.

Monitoring Ventilation with Blood Gases:

Most people know but do not realize that the most fragile factor is the pH. Vascular tone, drug effectiveness, cardiac efficiency, indeed life itself is dependent on keeping pH within a very narrow range. The primary controlling factors of pH is the carbonic acid bicarbonate buffer system of the blood which works according to the Henderson-Hasselbach equation. This must be understood.

To understand buffering for a moment dissociate from the difficult. Imagine a balance with the contents of both sides balanced. On one side there is bicarbonate 20 units, on the other CO_2 1 unit. The scale

shows a balance. The bicarbonate is 20 alkaline units and the CO_2 1 acid unit. Thus, in balance one acid unit then equals 20 alkaline units. The ventilator only works with the acid unit. By hyperventilation he can reduce it. By using inspired CO_2 or by hypoventilation, he can raise it. One acid unit is 40 mmHg. CO_2 . Now, if the ventilator hyperventilates the CO_2 down to 20 mmHg. it produces now a ratio of one-half an acid unit or $\frac{1}{2} : 20$ which changes the ratio to 1:40 making the alkaline units much in excess and causes pH to go to the alkaline side. Now, if the ventilator adds more hyperventilation and reduces the CO_2 to 10 mmHg., these are one-fourth acid units to 20 or a ratio of 1:80 making the pH much more alkaline. To go the other way, if the ventilator hypoventilates the patient and allows CO_2 to go up to 80 mmHg. or 2 acid units then the ratio is 2:20 or 1:10 and the patient is acidotic with low pH. It takes the body several days to adjust the alkaline units if there is a permanent change in the acid units. In metabolism without oxygen (anerobic metabolism) acid products other than CO_2 become prominent in the body. This is adjusted by the kidneys over several days. In other states, other acidotic substances get into the blood stream; diabetic acidosis, drug poisoning, uremia, diarrhea with dehydration, etc. The body normally ventilates CO_2 off so that the other acids $+\text{CO}_2 = 1$ acid unit and the 1 acid unit to 20 alkaline unit balance is maintained. If the patient has a cardiac arrest, polio, flail chest, etc., then he cannot make the changes necessary and the operator of the ventilating equipment must adjust the PCO_2 through his ventilatory effort to balance with other acids present and keep a pH of 7.35 to 7.45.

Thus, the first aim in ventilation is to look at the pH and PCO_2 and see how the CO_2 must be changed to keep the pH within normal limits. If an abnormal PCO_2 is required at first it must be watched closely. As the kidneys slowly correct the situation pH must be watched so that movement in the opposite way does not occur. Also, if the metabolic

acidosis gets worse greater rather than less correction may be needed. The first aim to repeat is to maintain pH normal by controlling PCO_2 with the ventilator. Deaths do and have occurred because the ventilator attempted to keep PCO_2 about 40 mmHg. and PO_2 normal and paid little attention to pH.

Again for emphasis, the ventilator lung mechanism is the most physiological means of acute correction of abnormal pH's. The IV route is slow, cumbersome and usually inadequate. Nature designed ventilatory techniques. Man as usual tried to outdo nature with his IV corrections in emergency situations.

Once pH is controlled by the ventilation of CO_2 then inspired oxygen partial pressures should be so adjusted as to give 70 to 150 mmHg. PO_2 pressure. As high partial pressures are required 70 mmHg. rather than higher should be aimed for. This is because blood will carry volume wise essentially as much at 70 mmHg. as at 150 mmHg. Second, lower inspiratory partial pressures are needed to produce 70 mmHg. than 150 mmHg. The lower the oxygen partial pressure the safer it is for the lungs in preventing the secondary changes of local oxygen toxicity in the lungs.

When pH and PCO_2 are both controlled and within normal levels (pH 7.35 to 7.45 PCO_2 35 to 45 mmHg.) then oxygen partial pressures should be normal on room air. If at this point oxygen partial pressures are not normal then there are problems within the lungs.

The four causes of low arterial oxygen partial pressure are: (1) hypo-ventilation, (2) poor interpulmonary mixing, (3) alveolar-capillary block and (4) interpulmonary arterial-venous shunting of blood. Since pH, PCO_2 are being well maintained number one, hypoventilation, can be ruled out.

Poor interpulmonary mixing can occur from many different causes such as obstructive disease, emphysema, trapping, end

expiratory retard, too small a tracheotomy tube and locked lung syndrome due to Isoproterenol-like drugs. This is usually due to poor tidal volumes into large functional residual capacities. This in turn causes poor differential ventilation of the lungs.

Alveolar-capillary block is due to anything that increases the oxygen gradient between the alveolus and capillary lumen. Heart failure with fluid, hyaline membrane, interstitial edema as produced regularly by too high pressures, too high oxygen concentration or both, boeck's sarcoid, fibrotic processes, scleroderms and other diseases can produce trouble here. The stiff lung seen following pump bypass, which is due in large part to failure to pump the pulmonary artery capillary bed with resultant anoxia and then on recirculation flooding and with too high oxygen partial pressures also produces stiff edematous alveolar capillary areas.

If inspiratory oxygen levels are increased both interpulmonary mixing problems and alveolar capillary diffusion problems can be neutralized and PO_2 maintained at 70 to 150 mmHg. It should be emphasized as higher inspiratory oxygen partial pressures are needed, 70 mmHg. rather than 100 to 150 mmHg. should be the goal to keep inspiratory oxygen partial pressures as low as possible. It is the inspiratory partial pressures that do damage to the lungs locally.

Interpulmonary arterio-venous shunting of blood means pulmonary artery blood going by alveoli that are not ventilated. Examples are consolidated pneumonia, alveolar atelectasis, pulmonary hematoma, aspiration, completely trapped areas as in locked lung syndrome due to Isoproterenol-like drugs that are vasodilators, etc. The blood continues to the left heart without any effective gas exchange. There the venous shunted blood mixes with blood that went by the ventilated lungs. The two pH's, CO_2 's and O_2 's equilibrate to form a new third pH, PCO_2 and PO_2 as a result. In this situation CO_2 may be ventilated off in the

ventilated portion and thus when mixed with the acid pH and high CO_2 of the venous shunted blood the pH and PCO_2 are normal. Oxygen, unfortunately, does not work that way. If the ventilated blood was 100 mmHg. pressure, then volume wise it will not carry but 0.003 cc/100cc/mmHg. This is essentially no more. Remember one gram of hemoglobin will carry 1.34 cc of oxygen. This being the case, increasing inspiratory oxygen partial pressures may cause high partial pressures but will not cause a significant increase in oxygen carrying capacity. Thus, when the ventilated and shunted portion are mixed in the left heart then low oxygen partial pressures result. When an A-V shunt increases to 30 per cent of the right heart output 100% oxygen closed circuit will not produce 70 mmHg. arterial partial pressure.

Thus, to review: When ventilating the first aim is to maintain pH by controlling PCO_2 . When this is done if oxygen partial pressure is 70 mmHg. to 100 mmHg., it can be assumed the lungs are essentially normal. If at this point oxygen partial pressure is low there are problems. These problems may be either poor interpulmonary mixing, alveolar-capillary diffusion problems or interpulmonary arterio-venous shunting in nature. Increasing inspiratory oxygen partial pressures will neutralize interpulmonary mixing and diffusion problems. As a rule, the lower the partial pressure necessary to correct, the more likely it is to be interpulmonary mixing rather than diffusion. If increasing oxygen partial pressures does not correct the problem it is interpulmonary A-V shunting in nature.

Thus, using the blood gases to judge changes necessary, tidal volume, functional residual volume and inspired oxygen partial pressures can be varied to produce the ventilatory results normal pH, PO_2 and PCO_2 .

Weaning the Patient From the Respirator

Much has been said on the subject of wean-

ing from a respirator. Time tables like *Penn-Central* have been set up to aid the less knowledgeable physician and therapist in this effort. These have been set up by the nation's experts who have not yet realized a patient does not have to be weaned from a respirator. As soon as a patient can maintain pH, PCO_2 and PO_2 within normal limits the respirator can be removed without dependence. If on removal the PO_2 slowly or rapidly decreases below 50 to 55 mmHg., the patient will frantically hyperventilate no matter what the pH and PCO_2 . Unfortunately, when this happens the astute clinician not recognizing a physiological respiratory alkalosis, accuses the patient of being addicted to the respirator. If the

ventilator has produced stiff lungs with too high pressures and too high inspiratory oxygen partial pressures then when taken off, gets acidic, PCO_2 goes up and PO_2 goes down. This patient may profit by being away from the torture rack for a period during which his lungs have a chance to return towards normal.

If proper flow rates, pressures and oxygen partial pressures are used in the first place as soon as the patient can maintain pH, PCO_2 and PO_2 cycling the machine on his own with pressures and flow rates matched, he usually can be eased off without difficulty or consequence. *Weaning is only for the mistreated!!!*

Genetic Engineering Cures

A well-known specialist in metabolic disorders has pin-pointed genetic engineering as a possible future cure for such medical problems as diabetes and atherosclerosis.

Dr. David M. Kipnis, professor of medicine at the Washington University School of Medicine, St. Louis, Mo., spoke at a two-day symposium in Birmingham to dedicate the new Diabetes Research Institute at the University of Alabama-Birmingham (UAB) Medical Center.

Dr. Kipnis said much more research should go into the field of metabolic disorders, because it "holds a challenge for the future with exciting new ways to go." He said genetic engineering is no longer science fiction and may hold the key to curing diabetes.

Genetic engineering would attempt to alter tendencies which are in-born in families. Already becoming popular is genetic counseling, which traces family medical problems handed down from parent to child, and instructs families what their chances are of passing on the problem through future generations.

"The cure of diabetes should be pursued at

its base," he said.

Kipnis lauded new transplantation techniques, and suggested that the future of transplants might include the pancreas, the single human organ which produces insulin to balance the amounts of sugar in the blood (diabetes is caused by an imbalance of blood sugar due to poor action of the pancreas). He listed other aids of metabolic treatment such as bioengineering and biophysics, and the development of new drugs.

But Kipnis interjected a note of despair when he said the proposed federal health cuts would delve sharply into research in biochemistry, biophysics and the "metabolic diseases especially."

He said special emphasis must be made to keep research in these fields alive, especially since "vast sums of money will be spent toward an ineffectual approach to many diseases. The public will become dismayed."

Referring to the new Diabetes Research Institute at UAB, Kipnis termed it "unique in the research of metabolic problems and diabetes."

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*Indications: Edema associated with congestive heart failure, cirrhosis of the liver, the nephrotic syndrome; steroid-induced and idiopathic edema; edema resistant to other diuretic therapy. Also, mild to moderate hypertension.

Contraindications: Pre-existing elevated serum potassium. Hypersensitivity to either component. Continued use in progressive renal or hepatic dysfunction or developing hyperkalemia.

Warnings: Do not use dietary potassium supplements or potassium salts unless hypokalemia develops or dietary potassium intake is markedly impaired. Enteric-coated potassium salts may cause small bowel stenosis with or without ulceration. Hyperkalemia (> 5.4 mEq/L) has been reported in 4% of patients under 60 years, in 12% of patients over 60 years, and in less than 8% of patients overall. Rarely, cases have been associated with cardiac irregularities. Accordingly, check serum potassium during therapy, particularly in patients with suspected or confirmed renal insufficiency (e.g., elderly or diabetics). If hyperkalemia develops, substitute a thiazide alone. If spironolactone is used concomitantly with 'Dyazide', check serum potassium frequently — both can cause potassium retention and sometimes hyperkalemia. Two deaths have been reported in patients on such combined therapy (in one, recommended dosage was exceeded; in the other, serum electrolytes were not properly monitored). Observe patients on 'Dyazide' regularly for possible blood dyscrasias, liver damage or other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium (triamterene, SK&F). Rarely, leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with the thiazides. Watch for signs of impending coma in acutely ill cirrhotics. Thiazides

are reported to cross the placental barrier and appear in breast milk. This may result in fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly other adverse reactions that have occurred in the adult. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

Precautions: Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in postsympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting (may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Rarely, necrotizing vasculitis, paresthesias, icterus, pancreatitis, and xanthopsia have occurred with thiazides alone.

Supplied: Bottles of 100 capsules.

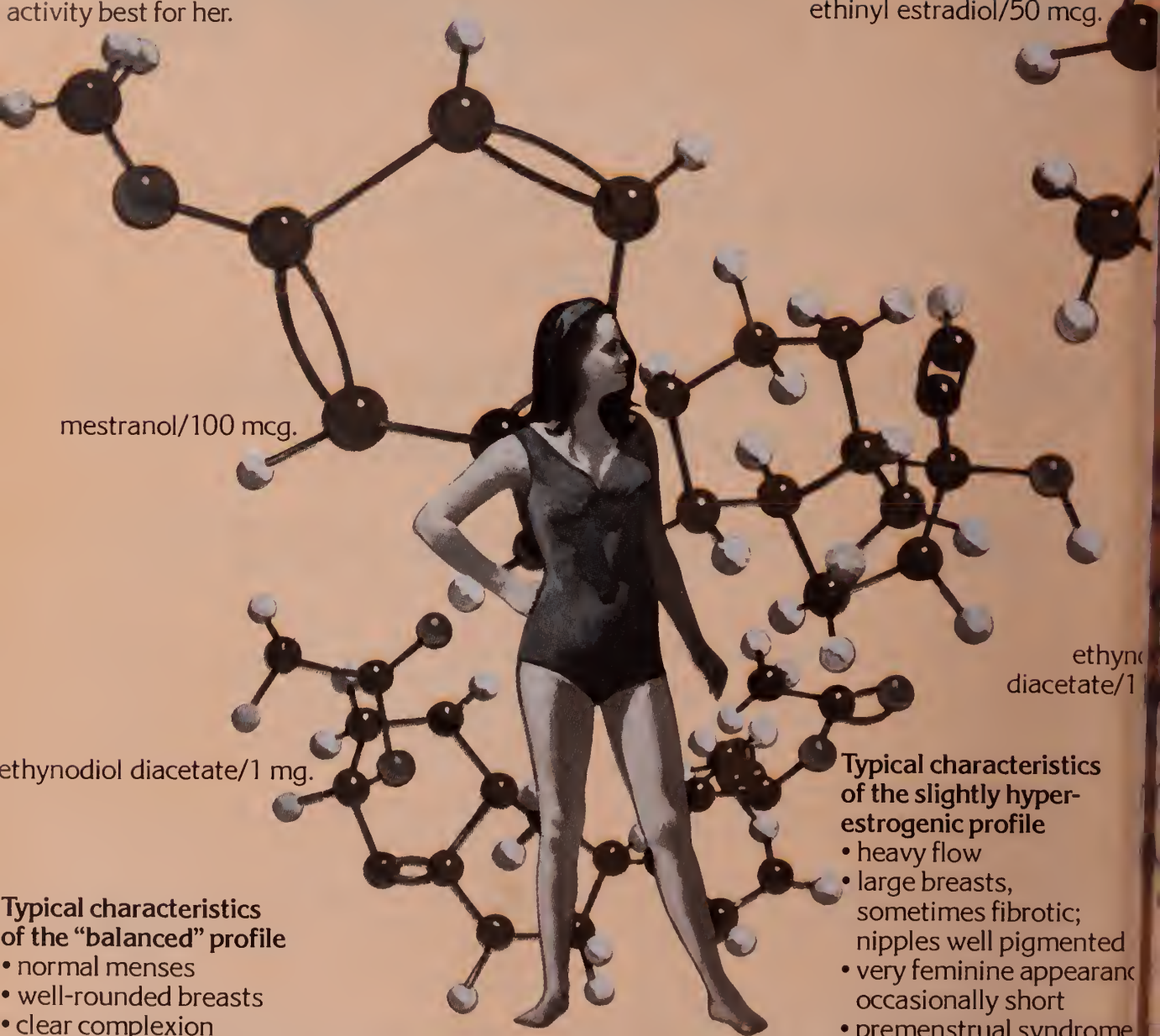
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This "center spectrum" pill has had excellent user acceptance for over seven years.

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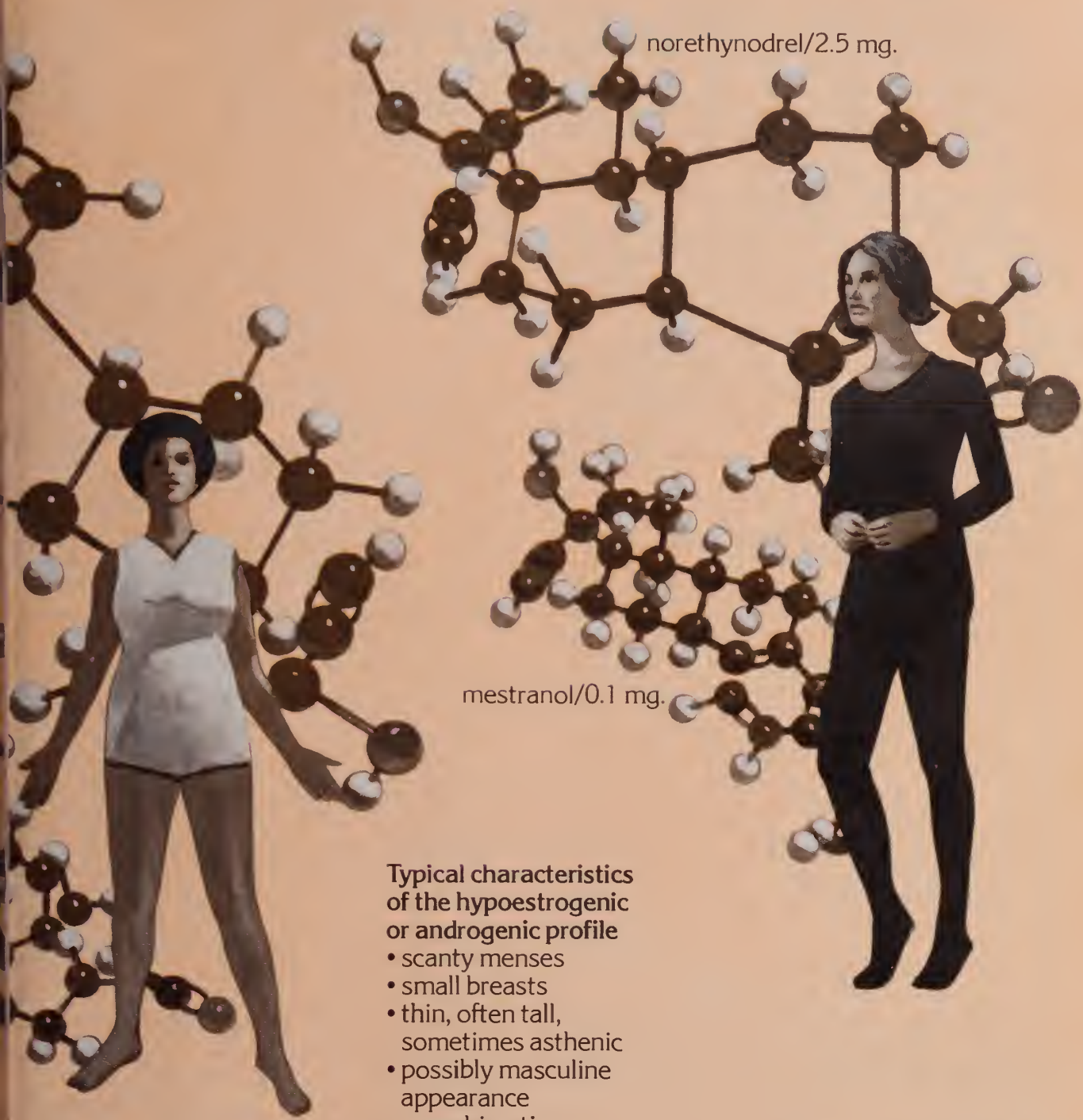
- heavy flow
- large breasts, sometimes fibrotic; nipples well pigmented
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This formulation, which has less estrogenic activity and a moderate progestogen dominance, may be a good beginning.

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Each pink tablet in Ovulen-28® and Demulen-28® is a placebo, containing no active ingredients.

Actions—Ovulen and Demulen act to prevent ovulation by inhibiting the output of gonadotropins from the pituitary gland. Ovulen and Demulen depress the output of both the follicle-stimulating hormone (FSH) and the luteinizing hormone (LH).

Special note—Oral contraceptives have been marketed in the United States since 1960. Reported pregnancy rates vary from product to product. The effectiveness of the sequential products appears to be somewhat lower than that of the combination products. Both types provide almost completely effective contraception.

An increased risk of thromboembolic disease associated with the use of hormonal contraceptives has now been shown in studies conducted in both Great Britain and the United States. Other risks, such as those of elevated blood pressure, liver disease and reduced tolerance to carbohydrates, have not been quantitated with precision.

Long-term administration of both natural and synthetic estrogens in subprimate animal species in multiples of the human dose increases the frequency of some animal carcinomas. These data cannot be transposed directly to man. The possible carcinogenicity due to the estrogens can be neither affirmed nor refuted at this time. Close clinical surveillance of all women taking oral contraceptives must be continued.

Indication—Ovulen and Demulen are indicated for oral contraception.

Contraindications—Patients with thrombophlebitis, thromboembolic disorders, cerebral apoplexy or a past history of these conditions, markedly impaired liver function, known or suspected carcinoma of the breast, known or suspected estrogen-dependent neoplasia and undiagnosed abnormal genital bleeding.

Warnings—The physician should be alert to the earliest manifestations of thrombotic disorders (thrombophlebitis, cerebrovascular disorders, pulmonary embolism and retinal thrombosis). Should any of these occur or be suspected the drug should be discontinued immediately.

Retrospective studies of morbidity and mortality conducted in Great Britain and studies of morbidity in the United States have shown a statistically significant association between thrombophlebitis, pulmonary embolism, and cerebral thrombosis and embolism and the use of oral contraceptives. There have been three principal studies in Britain¹⁻³ leading to this conclusion, and one⁴ in this country. The estimate of the relative risk of thromboembolism in the study by Vessey and Doll³ was about sevenfold, while Sartwell and associates⁴ in the United States found a relative risk of 4.4, meaning that the users are several times as likely to undergo thromboembolic disease without evident cause as nonusers. The American study also indicated that the risk did not persist after discontinuation of administration and that it was not enhanced by long-continued administration. The American study was not designed to evaluate a difference between products. However, the study suggested that there might be an increased risk of thromboembolic disease in users of sequential products. This risk cannot be quantitated, and further studies to confirm this finding are desirable.

Discontinue medication pending examination if there is sudden partial or complete loss of vision, or if there is a sudden onset of proptosis, diplopia or migraine. If examination reveals papilledema or retinal vascular lesions medication should be withdrawn.

Since the safety of Ovulen and Demulen in pregnancy has not been demonstrated, it is recommended that for any patient who has missed two consecutive periods pregnancy should be ruled out before continuing the contraceptive regimen. If the patient has not adhered to the prescribed schedule the possibility of pregnancy should be considered at the time of the first missed period.

A small fraction of the hormonal agents in oral contraceptives has been identified in the milk of mothers receiving these drugs. The long-range effect to the nursing infant cannot be determined at this time.

Precautions—The pretreatment and periodic physical examinations should include special reference to the breasts and pelvic organs, including a Papanicolaou smear since estrogens have been known to produce tumors, some of them malignant, in five species of subprimate animals. Endocrine and possibly liver function tests may be affected by treatment with Ovulen or Demulen. Therefore, if such tests are abnormal in a patient taking Ovulen or Demulen, it is recommended that they be repeated after the drug has been withdrawn for two months. Under the influence of progestogen-estrogen preparations pre-existing uterine fibromyomas may increase in size. Because these agents may cause some degree of fluid retention, conditions which might be influenced by this factor, such as epilepsy, migraine, asthma, cardiac or renal dysfunction, require careful observation. In breakthrough bleeding, and in all cases of irregular bleeding per vaginam, nonfunctional causes should be borne in mind. In undiagnosed bleeding per vaginam adequate diagnostic measures are indicated. Patients with a history of psychic depression should be carefully observed and the drug discontinued if the depression recurs to a serious degree. Any possible

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influence of prolonged Ovulen or Demulen therapy on pituitary, ovarian, adrenal, hepatic or uterine function awaits further study. A decreased glucose tolerance has been observed in a significant percentage of patients on oral contraceptives. The mechanism of this decrease is obscure. For this reason, diabetic patients should be carefully observed while receiving Ovulen or Demulen therapy. The age of the patient constitutes no absolute limiting factor, although treatment with Ovulen or Demulen may mask the onset of the climacteric. The pathologist should be advised of Ovulen or Demulen therapy when relevant specimens are submitted. Susceptible women may experience an increase in blood pressure following administration of contraceptive steroids.

Adverse reactions observed in patients receiving oral contraceptives—A statistically significant association has been demonstrated between use of oral contraceptives and the following serious adverse reactions: thrombophlebitis, pulmonary embolism and cerebral thrombosis.

Although available evidence is suggestive of an association, such relationship has been neither confirmed nor refuted for the following serious adverse reactions: neuro-ocular lesions, e.g., retinal thrombosis and optic neuritis.

The following adverse reactions are known to occur in patients receiving oral contraceptives: nausea, vomiting, gastrointestinal symptoms (such as abdominal cramps and bloating), breakthrough bleeding, spotting, change in menstrual flow, amenorrhea during and after treatment, edema, chloasma or melasma, breast changes (tenderness, enlargement and secretion), change in weight (increase or decrease), changes in cervical erosion and cervical secretions, suppression of lactation when given immediately post partum, cholestatic jaundice, migraine, rash (allergic), rise in blood pressure in susceptible individuals and mental depression.

Although the following adverse reactions have been reported in users of oral contraceptives, an association has been neither confirmed nor refuted: anovulation post treatment, premenstrual syndrome, changes in libido, changes in appetite, cystitis-like syndrome, headache, nervousness, dizziness, fatigue, backache, hirsutism, loss of scalp hair, erythema multiforme, erythema nodosum, hemorrhagic eruption and itching.

The following laboratory results may be altered by the use of contraceptives: hepatic function: increased sulfobromophthalein retention and other tests; coagulation tests: increase in prothrombin, Factors VII, VIII, IX and X; thyroid function: increase in PBI and butanol extractable protein bound iodine, and decrease in T³ uptake values; metyraj test and pregnanediol determination.

References: 1. Royal College of General Practitioners: Oral Contraception and Thrombo-Embolic Disease, J. Coll. Gen. Pract. 13:279 (May) 1967. 2. Inman, W. H. W., and Vessey, M. P.: Investigative Deaths from Pulmonary, Coronary, and Cerebral Thrombosis. Embolism in Women of Child-Bearing Age, Brit. Med. J. 2:193 (April 27) 1968. 3. Vessey, M. P., and Doll, R.: Investigation of Relationship Between Use of Oral Contraceptives and Thromboembolic Disease. Further Report, Brit. Med. J. 2:651-657 (June 14) 1969. 4. San P. E.; Masi, A. T.; Arthes, F. G.; Greene, G. R., and Smith, H. E.: Thromboembolism and Oral Contraceptives: An Epidemiologic Case-Control Study, Amer. J. Epidemiol. 90:365-380 (Nov.) 1969.

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Indication—Enovid-E is indicated for oral contraception.

The *Special Note*, *Contraindications*, *Warnings*, *Precautions*, *Adverse Reactions* listed above for Ovulen and Demulen are applicable to Enovid-E and should be observed when prescribing Enovid-E.

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Vital Statistics

NEW MEMBERS

Baldwin County

Wenzel, Ralph Erhart, b 13, mc Northwestern U. Med College 38, recip., Minn. 72, Drawer H, Robertsedale, Alabama 36567. GP. (Change of Address)

Franklin County

Meyer, Isidore S., b 19, mc U. Illinois 42, recip., Illinois 52, 101 E. Montgomery Street, Russellville, Alabama 35653. I

Jefferson County

Aderholt, Harry Chaney, b 38, mc Alabama 64, recip., NBME 69, 1529 North 25th Street, Birmingham, Alabama 35234. R.

Felgner, Charles F., b 44, mc Alabama 71, recip., NBME 72, 1500 Sixth Ave., South, Birmingham, Alabama 35205. GP.

Glover, John D., b 41, mc Tenn., 65, recip., Tenn., 72, 1717 11th Ave., South, Birmingham, Alabama 35205. Radiation Therapy.

Haigler, Edward D., Jr., b 40, mc Alabama 65, sb 66, 1529 25th Street North, Birmingham, Alabama 35234. I

Jared, O. Alan, III, b 41, mc Alabama 66, recip., NBME 67, 619 19th Street South, Birmingham, Alabama 35233. R.

Levene, Ralph Zalman, b 27, mc U. of Manitoba Medical Faculty (Canada) 50, recip., N.Y., 72, 1720 8th Ave., South, Birmingham, Alabama 35209.

McKinnon, Thomas D., b 41, mc Alabama 66, sb 67, 1717 11th Ave., South, Birmingham, Alabama 35205. Oph.

Staats, Okey James, b 33, mc Alabama 72, recip., Ga., 72, 1919 7th Ave., South, Birmingham, Alabama 35233.

Stifel, Seymour John, b 39, mc Chicago 66, recip., NBME 72, 1717 11th Ave., South, Birmingham, Alabama 35205. N-R

Younes, Henry Joseph, b 38, mc Kansas City College of Osteopathic Med., 68, recip., Missouri 72, 619 19th St., South, Birmingham, Alabama 35233. DO.

Lee County

Garrett, William Lee, Jr., b 39, mc Emory 65, recip., Ga., 72, Medical Arts Center, Opelika, Alabama 36801. U.

Macon County

Reid, William G., b 20, mc Howard U., 50, recip., N. C., 72, 404 Alabama Ave., Tuskegee Institute, Tuskegee, Alabama 36088. ObG.

Montgomery County

Springall, Francis S., b 12, mc U. Texas 40, recip., Texas 72, Alabama Dept. of Public Health, State Office Building, Montgomery, Alabama 36104. PH-S

MEMBERS DECEASED

Autauga County

Nichols, Robert K., Prattville Alabama, Deceased 2/9/73.

Jefferson County

Morgan, John R., Birmingham, Alabama Deceased 11/25/72.

AROUND THE STATE

Marengo County

Dunning, Guy J., Linden, Alabama, Deceased

Tuscaloosa County

Reim, Norman H. Tuscaloosa, Alabama, Deceased 7/31/72.

CHANGES OF ADDRESS

Covington County

Johnson, J. Wayne, present Andalusia to 100 Oak St., P. O. Box 940, Andalusia, Alabama 36420.

Elmore County

Donald, William J., present Montgomery to Rt. 1, Box 394, Millbrook, Alabama 36054.

Franklin County

Anderson, James Burns, Jr., present Russellville to Rt. 1, Wilson Lake Shores, Sheffield, Alabama 35660. (Transfer to member of Colbert County)

Jefferson County

Goel, Yogendra S., present Birmingham to 1804 Post Oak Rd., Birmingham, Alabama 35216.

Pruet, Charles W., present Fairfield to 1806 Oxmoor Rd., Homewood, Alabama 35209.

Lee County

Schlichter, Frank J., present Hison, Tenn., to 1711 Perrereil Pkwy., Opelika, Alabama 36801.

Mobile County

Dowling, Herbert B., Jr., present Mobile to 3221 Riviere Du Chien Rd., Mobile, Alabama 36609.

Montgomery County

Garrick, Jean, present Montgomery to 1940 Shades Cliff Terrace, Birmingham, Alabama 35216.

Walker County

Russell, Bruce W., present Sumiton to Drawer U, Sumiton, Alabama 35148.

NEW TELEPHONE NUMBERS

Aderholt, H. C., Jefferson	252-6121
Baxley, W. A., Jefferson	934-3438
Felgner, C. F., Jefferson	933-7081
Foy, R. E., Jr., Coffee	347-2233
Garrett, W. L., Jr., Lee	
Gibson, T. A., Jackson	574-4755
Glover, J. D., Jefferson	933-8122
Haigler, E. D., Jr., Jefferson	252-6121
Hatchett, B. F., Jr., Lauderdale	766-8450
Hogan, W. L., Jr., Mobile	476-2930
Jared, O. A., III, Jefferson	934-5131
Levene, R. Z., Jefferson	933-8251
McKinnon, T. D., Jefferson	933-6903
Meyer, I. S., Franklin	332-2414
Reid, W. G., Macon	727-8276
Springall, F. S., Montgomery	269-7373
Staats, O. J., Jefferson	934-4481
Stifel, S. J., Jefferson	933-8122
Turk, W. B., Lee	887-8377
Waldrop, E. G., Jefferson	933-8141
Wenzel, R. E., Baldwin	949-7126
Younes, H. J., Jefferson	934-4696

MEMBERS REINSTATED

Jefferson County

Baxley, William A., b 33, mc Duke U., 62, recip., N. C., 66, 1919 7th Ave., South, Birmingham, Alabama 35233. C.

Lauderdale County

Hatchett, Benjamin Franklin, Jr., b 39, mc Tulane 64, recip., La., 65, 220 West Tenn. St., Florence, Alabama 35630.

CHANGE OF SPECIALTY

Calhoun County

Langdon, Harold R., Anniston Army Depot, Anniston, Alabama 36201. Ind.

Colbert County

Mullendore, Maurice M., 109 W., 4th St., Sheffield, Alabama 35660. GP-S.

Dallas County

Armstrong, James H., 509 Parkman Ave., Selma, Alabama 36701. I.

AROUND THE STATE

Etowah County

Burns, James H., P. O. Box 287, Gadsden, Alabama 35902. ANES.

Jefferson County

Windsor, James L., 705 Memorial Dr., Bessemer, Alabama 35020. U.

New Physicians Licensed to Practice in Alabama



R. S. Ashford
M. D.
Birmingham



S. C. Bajaj
M. D.
Birmingham



R. A. Buchanan, Jr.
M. D.
Birmingham



N. A. Callahan
M. D.
Birmingham



M. S. Bonner
M. D.
Birmingham



A'Delbert Bowen, III
M. D.
Birmingham



R. L. Carroll, Jr.
M. D.
(No location)



J. O. Colley, III
M. D.
Troy



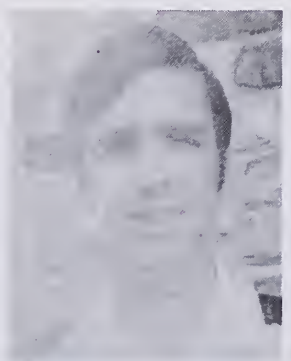
J. W. Brannon
M. D.
Dothan



A. W. Britt
M. D.
Tuscaloosa



R. B. Currey
M. D.
Mobile



J. C. Dormois
M. D.
Flomaton

(Continued on Page 713)



These are Candeptin:

The highly effective candicidin
for all your vaginal moniliasis patients.

First came CANDEPTIN (candicidin) Tablets for intravaginal use. Then CANDEPTIN Ointment to treat labial involvement and for intravaginal use. Now unique **CANDEPTIN VAGELETTES**—candicidin ointment in soft gelatin capsules—extend the range of CANDEPTIN therapy to even your pregnant and virginal patients (you merely cut off the narrow tip and extrude the contents through the intact hymen).

Clinical proof of potency

CANDEPTIN brings your patients prompt relief of itching, burning and discharge—usually within 72 hours.¹ A single, 14-day course of treatment is usually all that's needed for a complete cure.^{2,3,4}

Significantly more potent *in vitro* than

nystatin.⁵ CANDEPTIN Tablets and Ointment have shown clinical cure rates of 90% and higher in both pregnant and non-pregnant patients.^{1,4,6} And in recent studies of **CANDEPTIN VAGELETTES** Vaginal Capsules involving both pregnant and non-pregnant patients, a 100% culture-confirmed cure rate was achieved with a single 14-day course of therapy.^{2,3}

Only CANDEPTIN gives you a dosage form for every therapeutic need, plus *eight years'* clinical proof of potency. Consider CANDEPTIN for your next vaginal moniliasis patient.

CANDEPTIN[®] (candicidin)

Description: CANDEPTIN (candicidin)

Vaginal Ointment contains a dispersion of candicidin powder equivalent to 0.6 mg. per gm. or 0.06% Candicidin activity in U.S.P. petrolatum. 3 mg. of Candicidin is contained in 5 gm. of ointment or one applicatorful. CANDEPTIN Vaginal Tablets contain Candicidin powder equivalent to 3 mg. (0.3%) Candicidin activity dispersed in starch, lactose and magnesium stearate. CANDEPTIN VAGELETTES Vaginal Capsules contain 3 mg. of Candicidin activity dispersed in 5 gm. U.S.P. petrolatum.

Action: CANDEPTIN Vaginal Ointment, Vaginal Tablets, and VAGELETTES Vaginal Capsules possess anti-monomial activity.

Indications: Vaginitis due to *Candida albicans* and other *Candida* species.

Contraindications: Contraindicated for patients known to be sensitive to any of its components. During pregnancy manual Tablet or VAGELETTES Capsule insertion may be preferred since the use of the ointment applicator or tablet inserter may be contraindicated.

Caution: During treatment it is recommended that the patient refrain from sexual intercourse or the husband wear a condom to avoid re-infection.

Adverse Reaction: Clinical reports of sensitization or temporary irritation with CANDEPTIN Vaginal Ointment, Vaginal Tablets or VAGELETTES Vaginal Capsules have been extremely rare.

Dosage: One vaginal applicatorful of CANDEPTIN Ointment or one Vaginal Tablet or one VAGELETTES Vaginal Capsule is inserted high in the vagina twice a day, in the morning and at bedtime, for 14 days. Treatment may be repeated if symptoms persist or reappear.

Available Dosage Forms: CANDEPTIN Vaginal Ointment is supplied in 75 gm. tubes with applicator (14-day regimen requires 2 tubes). CANDEPTIN Vaginal Tablets are packaged in boxes of 28, in foil with inserter—enough for a full course of treatment. CANDEPTIN VAGELETTES Vaginal Capsules are packaged in boxes of 14 (14-day regimen requires 2 boxes.)

Store under refrigeration to insure full potency.

Federal law prohibits dispensing without prescription.

References: 1. Olsen, J.R. *Journal-Lancet* 85:287 (July) 1965. 2. Giorlando, S.W. *Ob. Gyn Dig.* 13:32 (Sept.) 1971. 3. Decker, A. Case Reports on File, Medical Department, Julius Schmid. 4. Giorlando, S.W. Torres, J.F., and Muscillo, G.: *Am. J. Obs. & Gynec.* 90:370 (Oct. 1) 1964. 5. Lechevalier, H.: *Antibiotics Annual 1959-1960*. New York, Antibiotica Inc., 1960, pp. 614-618. 6. Friedel, H.J.: *Maryland M.J.*, 15:36 (Feb.) 1966.

Julius Schmid Pharmaceuticals
423 West 55th Street
New York, New York 10019

CANDEPTIN® (candicidin)

Vaginal Tablets

Vaginal Ointment

and VAGELETTES™ Vaginal Capsules



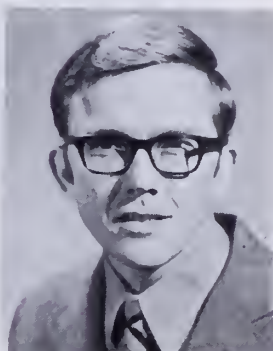
N. P. Ewing
M. D.
Florala



T. L. Ewing
M. D.
Florala



J. M. Foxworth
M. D.
Redstone Arsenal



C. W. Friend
M. D.
Birmingham



B. L. U. Goff
M. D.
Mobile



M. R. Grate, Jr.
M. D.
Alabaster



J. D. Hanks, Jr.
M. D.
Birmingham



G. R. Hart
M. D.
Mobile

AROUND THE STATE



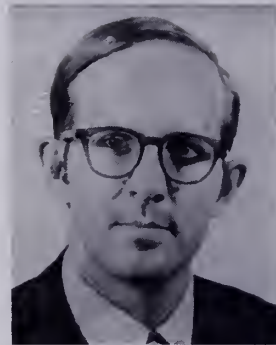
D. L. Johnson
M. D.
Birmingham



R. E. Jones, Jr.
M. D.
Birmingham



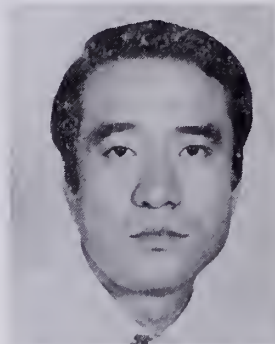
W. A. H. MacLean
M. D.
Birmingham



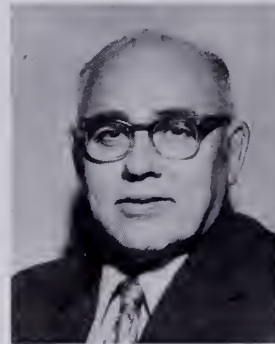
R. M. McClerkey, Jr.
M. D.
Birmingham



S. K. Khare
M. D.
Birmingham



Stephen Kim
M. D.
Birmingham



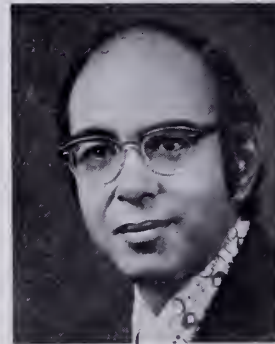
K. F. Menk
M. D.
Birmingham



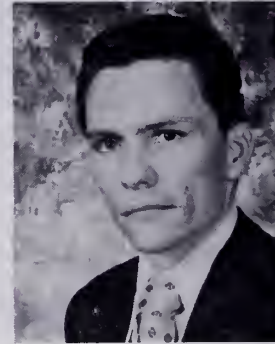
S. D. Morrison
M. D.
Birmingham



H. K. Lancaster, Jr.
M. D.
Montgomery



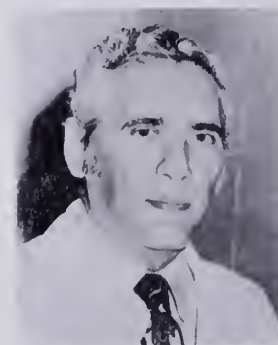
R. J. Levine
M. D.
Montgomery



O. R. Nunley, Jr.
M. D.
Anniston



Sumer Pek
M. D.
Birmingham



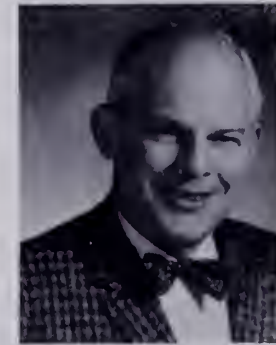
R. Z. Levene
M. D.
Birmingham



K. J. Lum
M. D.
Ft. Rucker

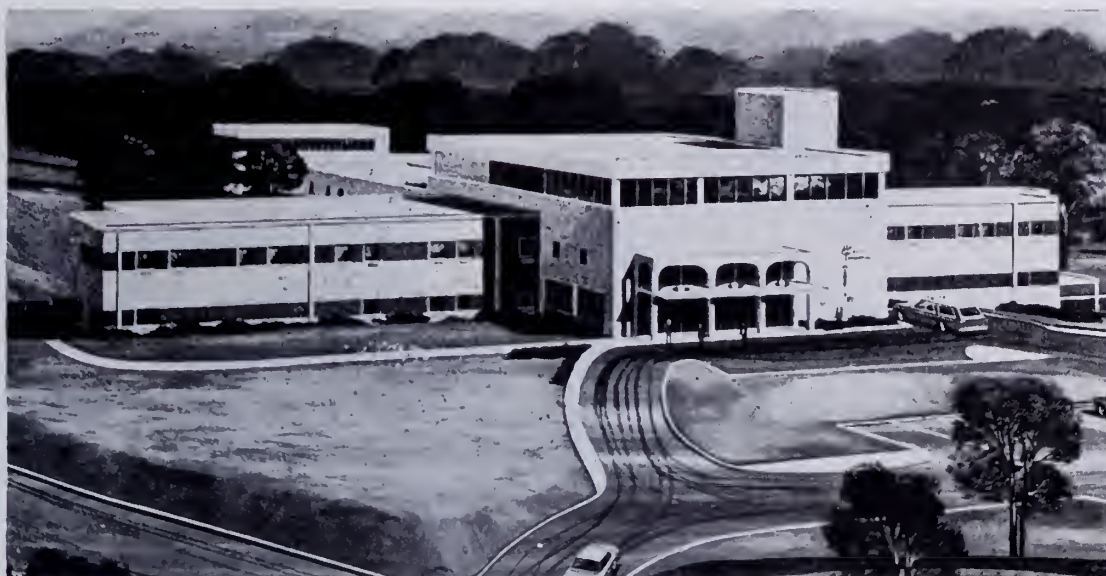


J. M. Potts, Jr.
M. D.
Birmingham



R. H. Ramsey
M. D.
Millry

(Continued on Page 720)



Hill Crest HOSPITAL

For Intensive Treatment of Psychiatric Disorders

This 113-bed non-governmental psychiatric hospital provides modern facilities for diagnosis and treatment of patients with all degrees of illness, including those who show severely disturbed behavior. Alcoholic and drug abuse patients are also accepted.

In addition to care by psychiatrists and by consultants in all medical specialties, the treatment program includes occupational, recreational, and physical therapy, social services, and tutoring. Emphasis is on short-term, intensive treatment of voluntary patients.

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Hardin M. Ritchey, M. D.
F. Joseph Nuckols, M. D.
James A. Greene, M. D.
Charles W. Moorefield, M. D.

ADMINISTRATOR:

Robert V. Sanders

DIRECTOR OF SOCIAL SERVICES:

James T. Kemp, A. C. S. W.

HILL CREST HOSPITAL

Hill Crest Foundation, Inc.

6869 Fifth Avenue South

Birmingham, Alabama 35212

PHONE: 205-836-7201

Pinworm therapy is often a family affair



Contraindications: History of hypersensitivity to thiabendazole.

Warnings: If hypersensitivity reactions occur, drug should be discontinued immediately and not resumed. Rarely, erythema multiforme has been associated with thiabendazole therapy; in severe cases (Stevens-Johnson syndrome), fatalities have occurred. Because CNS side effects may occur quite frequently, activities requiring mental alertness should be avoided. Safe use in pregnancy or lactation has not been established.

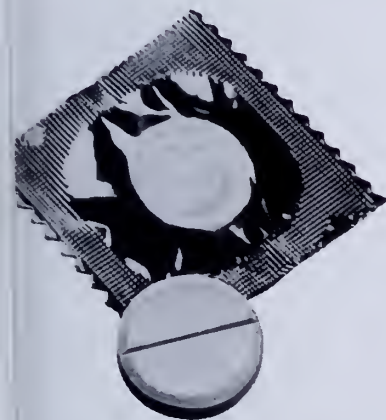
Precautions: Ideally, supportive therapy is indicated for anemic, dehydrated, or malnourished patients prior to initiation of anthelmintic therapy. In presence of hepatic or renal dysfunction,

patients should be carefully monitored.

Adverse Reactions: Most frequently encountered are anorexia, nausea, vomiting, and dizziness. Less frequently, diarrhea, epigastric distress, pruritus, weariness, drowsiness, giddiness, and headache have occurred. Rarely, tinnitus, hyperirritability, numbness, abnormal sensation in eyes, blurring of vision, xanthopsia; hypotension, collapse; enuresis; transient rise in cephalin flocculation and SGOT; perianal rash, cholestasis, parenchymal liver damage; hyperglycemia; transient leukopenia; malodor of the urine, crystalluria, hematuria; appearance of Ascaris in the mouth and nose. Hypersensitivity reactions

A New Dosage Form:

Chewable Tablets 500 mg Mintezol® (THIABENDAZOLE | MSD)



so easy to take
everyone in the family
can keep to the
regimen you prescribe

clude: fever, facial flush, chills, conjunctival injection,
gioedema, anaphylaxis, skin rashes, erythema multiforme
cluding Stevens-Johnson syndrome), and lymphadenopathy.
plied: Chewable tablets, containing 500 mg thiabendazole,
boxes of 36, strip packaged, individually foil wrapped;
sension, containing 500 mg thiabendazole per 5 cc, in
ttles of 120 cc.

For more detailed information, consult your MSD representa-
or see full prescribing information. Merck Sharp &
hme, Division of Merck & Co., Inc., West Point, Pa. 19486

INDICATION | DOSAGE SCHEDULE

MINTEZOL® (Thiabendazole, MSD) has demonstrated effectiveness against a broad spectrum of nematode infections. Dosages are weight related. For your convenience, the information in the weight-dose chart below is included in the full prescribing information and in the 1973 edition of PDR.

The recommended maximum daily dose of MINTEZOL is 3 g (6 tablets).

MINTEZOL should be given after meals if possible. Dietary restriction, complementary medications, and cleansing enemas are not needed.

The usual dosage schedule for all conditions is two doses per day. The size of the dose is determined by the patient's weight.

Weight-dose chart:

WEIGHT (lb)	EACH DOSE (g)	TABLETS
25	0.25	½
50	0.5	1
75	0.75	1½
100	1.0	2
125	1.25	2½
150 & over	1.5	3

The regimen for each indication follows:

INDICATION	REGIMEN	COMMENTS
Pinworm disease	Two doses per day for 1 day. Repeat in 7 days. This regimen is designed to reduce the risk of reinfection.	If this is not practical, give 2 doses per day for 2 successive days.
Threadworm,* large roundworm,* hookworm,* and whipworm* disease	Two doses per day for 2 successive days.	A single dose of 20 mg/lb or 50 mg/kg may be employed as an alternative schedule, but a higher incidence of side effects should be expected.
Creeping eruption	Two doses per day for 2 successive days.	If active lesions are still present 2 days after completion of therapy, a second course is recommended.
Symptoms of trichinosis* during the invasive phase of the disease	Two doses per day for 2 to 4 successive days according to the response of the patient.	The optimal dosage for the treatment of trichinosis has not been established.

*Clinical experience with thiabendazole for treatment of each of these conditions in children weighing less than 30 lb has been limited.



If he's making the
rounds of San Francisco...

Antivert[®] (meclizine HCl) for vertigo*

Antivert[®] (meclizine HCl) has been found useful in the management of vertigo associated with diseases affecting the vestibular system. It is available as Antivert (12.5 mg. meclizine HCl) and Antivert/25 (25 mg. meclizine HCl) scored tablets for convenience and flexibility of dosage. Antivert/25 (25 mg. meclizine HCl) Chewable Tablets are available for the management of nausea, vomiting, and dizziness associated with motion sickness.

INDICATIONS. Based on a review of this drug by the National Academy of Sciences-National Research Council and/or other information, FDA has classified the indications as follows:

Effective: Management of nausea and vomiting and dizziness associated with motion sickness.

Possibly Effective: Management of vertigo associated with diseases affecting the vestibular system.

Final classification of the less than effective indications requires further investigation.

CONTRAINDICATIONS. Administration of Antivert during pregnancy or to women who may become pregnant is contraindicated in view of the teratogenic effect of the drug in rats.

The administration of meclizine to pregnant rats during the 12th-15th day of gestation has produced cleft palate in the offspring. Limited studies using doses of over 100 mg./kg./day in rabbits and 10 mg./kg./day in pigs and monkeys did not show cleft palate. Congeners of meclizine have caused cleft palate in species other than the rat.

Meclizine HCl is contraindicated in individuals who have shown a previous hypersensitivity to it.

WARNINGS. Since drowsiness may, on occasion, occur with use of this drug, patients should be warned of this possibility and cautioned against driving a car or operating dangerous machinery.

Usage in Children: Clinical studies establishing safety and effectiveness in children have not been done; therefore, usage is not recommended in the pediatric age group.

Usage in Pregnancy: See "Contraindications."

ADVERSE REACTIONS. Drowsiness, dry mouth and, on rare occasions, blurred vision have been reported.

ROERIG *Pfizer*

A division of Pfizer Pharmaceuticals
New York, New York 10017

(Continued from Page 714)



I. L. Shapiro
M. D.
Anniston



J. F. Sharp
M. D.
Birmingham



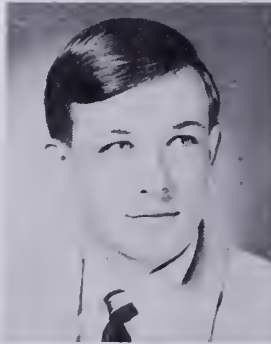
T. B. Tinsley
M. D.
Florence



L. T. Utley
M. D.
Vernon



R. G. Sherrill, Jr.
M. D.
Birmingham



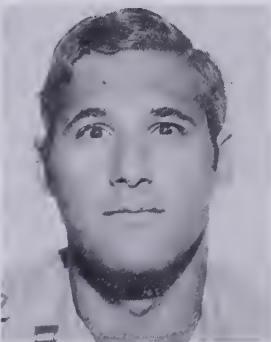
J. B. Smithson
M. D.
Birmingham



A. L. Waldo
M. D.
Birmingham



L. L. Whiddon, Jr.
M. D.
(No location)



Sheldon Staller
M. D.
Phenix City



Donald Stewart
M. D.
Birmingham



L. E. White, Jr.
M. D.
Mobile



T. P. Wilder
M. D.
Huntsville



S. J. Stifel
M. D.
Birmingham



W. E. Strickland
M. D.
Phenix City

The first medical school specifically for Indian students, a school which will teach traditional Navajo medicine along with modern medicine, plans to open in June, 1973. It will be operated by the University of New Mexico and funded by a \$4.7 million grant. Until buildings are constructed, the school will use facilities of the Navajo community college and public health service on the 25,000-square-mile reservation at Window Rock, Ariz.

National Conference on Virology and Immunology in Human Cancer

November 29, 1973 - December 1, 1973,
Waldorf-Astoria Hotel, New York, New
York.

Sponsored by: American Cancer Society,
National Cancer Institute.

The purpose of this Conference is to present to the medical and related professions the current developments in research and clinical investigation in virology and immunology and the assessment and implications of this work in the prevention and

treatment of human cancer.

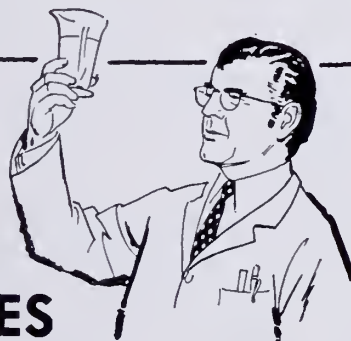
Sessions are open to all members of the medical and related health professions. Pre-registration is requested. There is no registration fee.

For information write:

Sidney L. Arje, M. D., National Conference
on Virology and Immunology in Human
Cancer, American Cancer Society, Inc., 219
East 42nd Street, New York, New York
10017.

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Dependability
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National and Local Influence On Continuing Medical Education

Initially, let me mention that six state medical societies are requiring certain minimal amounts of continuing medical education for maintenance of membership. These are the societies of Oregon, Arizona, Pennsylvania, Massachusetts, New Jersey and Florida. And there are *three* state boards of *licensure* which have been given permissive legislation to require CME for maintenance of licensure to practice. These conditions, themselves, are forces affecting continuing medical education. They are a result, I believe, of other forces I should like to mention.

First, let us look at external influences. Almost five years ago in November 1967, the *National Advisory Commission on Health Manpower* issued its report to the nation. The part of this report of most interest to us in continuing medical education, deals with its recommendation concerning continuing education and relicensure of health professionals. The Commission noted that the increasing pace of medical advances has rendered inadequate the older means of assuring that physicians will use the best techniques and information available. It stressed that the physician's education must be continued as long as he practices. Otherwise, the physician will be unaware of new developments and will probably continue to use outdated techniques of diagnosis and treatment which would be far less effective in improving the quality of health care than if he had made strong efforts at self-renewal.

There are certain features of the Commission's report which should be restated at this time. First, the Commission noted that the simple deed of making educational opportunities available to the physician will not assure his utilization of such opportunity unless sufficient incentives are provided. Among these incentives would be the relicensure of health professionals, including

physicians, periodically, on the basis of acceptable performance in continuing education. The Commission also noted that an alternative way for the health profession to document his self-renewal would be for him to take a challenge examination in his specialty.

Here, the Commission pointed out the many potential drawbacks to the proposal for relicensing. Among the drawbacks the Commission noted, would be the need for safeguards against abuse. It also presented the fact that many existing programs of continuing medical education are quite inadequate in both content and geographic distribution to serve as a basis for relicensure. It noted that new programs would need to be developed and presented in such a way that they would be tailored to the location and time requirements of busy practitioners. It also realized that the institution of any relicensure requirement might have to be prospective and applied only to those who enter professional schools *after* the start of such a new requirement. The Commission expressed its opinion, also, regarding accreditation, pointing out that, if continuing education should become a basis for relicensure, a mechanism would have to be developed to accredit these new programs professionally. In this relationship, and I believe this is another key to their thinking, the report of the Commission stated that *professional* societies as well as state governments should explore these possibilities of relicensure based upon continuing medical education.

The Commission's report has undoubtedly been a strong external influence in the field of continuing medical education.

Another motivating force has been the establishment by the Joint Commission of Accreditation of Hospitals of a new and important standard in December, 1970. This new standard of the JCAH requires that the medical staff of a hospital seeking accredita-

Prepared by Rutledge W. Howard, M. D. for the: 8th Annual Winter Seminar of the Wyoming State Medical Society Casper, Wyoming, February 8 & 9, 1973.

tion by the Joint Commission should provide a continuing education program for its professional staff, or that the medical staff shall give evidence of participation in such a program.

Probably a less noticed but equally important external force has been the growth of hospital medical education and the increasing desire of medical staffs to seek continuing self-renewal close to their places of work, related to solving their own patients' problems and available at a time, place, and pace of the physician's own choice.

The strong interest of the Association for Hospital Medical Education and the growing awareness of many medical school administrators of the importance of continuing medical education have played a very strong role.

The strengthening of continuing medical education has also been reinforced by the American MEDICAL Association Council on Medical Education. For more than a decade, the AMA has been giving close attention to its role in continuing medical education. With a history of having developed, in conjunction with other organizations, accreditation of undergraduate medical education at the medical schools, and graduate medical education during the internships and residencies, the AMA has worked at ways and means to increase the development of relevant and meaningful continuing medical education also.

The AMA, I believe, has exerted some influence, in a beneficial way, on the entire field of continuing medical education, not only by its accreditation activities just mentioned, but also by several other systems and programs.

For 18 years it has prepared an annual course listing, published in *JAMA*, or as a supplement to *JAMA*. This, Annual Course List, has enabled practicing physicians in many cases to plan their own self-renewal well in advance. It has given opportunities to program planners and producers of con-

tinuing medical education to avoid duplication of courses and other CME activities. It now includes a list of some of the audio tape programs which have been so useful to the practitioner.

In the field of motivation, the AMA developed a program in which it supported and encouraged practicing physicians to participate in keeping up to date. We know it as the Physician's Recognition Award Program. Gradually it is being refined so that credit can be given for important ways each of us uses in our daily lives to keep abreast of new knowledge and skills. About 40,000 physicians have received the certificate, indicating they have met certain minimum base lines of continuing education participation. This program may not appear to many of us to have much significance up to this point. It was designed, however, to provide a means to all physicians in the U. S. for documenting that they do, indeed, keep up to date in a sensible way. The Recognition Award Program is really not an Award, but a simple certificate which identifies a physician as having participated appropriately in continuing medical education. If the government, at any level, should insist that we give evidence of competence, as it relates to continuing medical education, the AMA Physician's Recognition Award can provide the means to do this.

In other areas of continuing medical education, the AMA prepares and distributes a national newsletter, the only one of its kind, which helps all interested in planning and producing CME Programs to know what the other fellow is doing. It is a simple and small document each month, but it has served a useful purpose, and we expect it will continue to do so.

Lest you think I am praising the AMA too much, let me point out another area where the specialty medical societies have played an early and major role. This is in the area of self-assessment testing. In this case, without threat to himself, a physician can participate in any one of 14 different self-

assessment tests prepared by the major specialty societies. He can determine, in the quiet of his own office or home, how much he knows and how well he manages patient problems. Various means are being developed so he will be able to compare his own knowledge and judgment to that of the rest of the specialty who participate in the self-assessment test of that specialty.

Even here, however, the AMA is playing a helpful role. It has established a self-assessment resource center, which it hopes and believes will develop models of new methods of self-assessment. It is doing this with strong input from the specialty medical societies, and it hopes to give these specialty societies new ways and new models for them to use.

I must not overlook that the Committee on Malpractice of HEW has prepared a report in which a recommendation is made that there be mandatory participation in continuing medical education for re-registration of the license to practice medicine. No one can foresee the impact of this recommendation. I, personally, believe it is yet another effort on the part of the government to require of physicians that they demonstrate certain aspects of their competence. The AMA Recognition Award, of course, could play a big role in satisfying the demands of such a recommendation, if indeed, the recommendation should ever be implemented at state or national level.

I must not forget another force exerting strong influence on continuing medical education. I refer, here, to the PSRO amendment to the bill passed last October, 1972, and which is now law. While the details and regulations have not yet been developed related to PSRO, it is likely that there will be an eventual system of yardsticks to determine whether a doctor is providing good quality medical care. It is also probable that quality of medical care will be measured in some type of program which will include input from utilization review activities, from claims review activities, and from activities

related to the physician's own competence. Here, again, there will probably be emphasis on continuing medical education as a means of keeping up to date. It is likely, also, that the judgment of a physician's colleagues and the judgment of foundations for medical care will have a big impact on whether he is using his knowledge and skills suitably. In other words, whether he is performing according to basic standards. I like to think of Peer Review as a three-legged stool; one leg of which is utilization review, dealing with dollars; a second leg of which is claims review; and the third leg of which deals with quality of care. The third leg includes, not only the performance of the physician, but also whether the health care delivery system is suitable both for the patient and the physician.

My great hope, and I believe the hope of all of us here, is that quality of care assurance programs (in other words, Peer Review) can be non-punitive and can identify ways by which we can secure continuing medical education to do a better job. If it is a non-punitive system, there is no question that we can live with it and cooperate. That is why the AMA, and particularly the Division of Medical Education at the AMA, with its policy making Council on Medical Education, is taking major steps to play a strong role in helping the government to develop its guidelines for the Bennett amendment, which established PSRO.

These are some of the forces effecting continuing medical education. I hope that you will find them worthwhile for review.

American men now have a life expectancy, at birth, of 67.1 years, while that for women is 74.6 years. Average life expectancy at birth in 1900 was less than 50 years.

Pediatrics, the care of children, is the most popular specialty among women physicians, accounting for almost 20% of all lady doctors. Surgery is the most popular specialty with men, drawing almost 24% of all male physicians, says the American Medical Association.

Alabama's first Medical Practice Act, adopted in 1819, spoke out against those practicing medicine who "shall bleed, apply a blister of Spanish flies, administer calomel, opium or laudanum."

BLUE CROSS-BLUE SHIELD OF ALABAMA



The Scars Of Others--General Surgery

This is the first in a series of reports on professional liability loss problems within a particular medical specialty. Although this report focuses on malpractice in general surgery, it contains information which will benefit all physicians especially those engaged in any of the surgical specialties. Future issues will have similar reports on other specialties such as orthopedics, anesthesiology, obstetrics and gynecology, and pediatrics.

O. T. Mallery, Jr., M. D.
Medical Director

Nancy Bielefeld, B. S.
Professional Liability
Loss Control Specialist

From the Medical Department
Employers Insurance of Wausau
Wausau, Wisconsin

The cost of professional liability insurance has become a major concern to physicians everywhere. As an underwriter of this type of insurance, we are partners in this concern. Insurance companies do not like skyrocketing rates and premiums any more than the customer does, because they are a reflection of adverse loss experience. Consequently, a review of malpractice actions was made to identify the loss problems and to assist physicians in their control.

There is an old quotation that goes "the scars of others should teach caution." In this review of the malpractice scars of general surgeons, we are trying to do just that—forewarn you of impending danger. Patient injury prevention is in the hands of the physician, not the courts, not the insurance carrier.

Are You Listening? Really Listening?

In this busy complex world, people-to-people relationships have collapsed. We're often too busy to listen, *really* listen to the concerns of others. We hear the sounds others make, we read the warnings written,

but we fail "to give heed to or to give regard with care," which is what Webster says listening is. Patients complain, warnings are written, but all too frequently nobody is really listening.

Case A 70-year-old male patient had diabetes and hypertension and had been under the care of his personal physician for an appendiceal abscess. The treatment included drainage of the appendiceal abscess and an appendectomy, as well as insulin and reserpine for the diabetes and hypertension. During the 18-month period of care, the patient repeatedly complained of pain in his legs. These complaints were recorded in the physician's office records and the hospital records. But, not until the patient developed foot drop, discoloration of the great toe, and absence of pulses in both feet, was the complaint really heard. Neurological consultation made the diagnosis of diabetic neuritis and thrombo-angitis obliterans of the lower extremities. A short time later, gangrene developed in both feet and both legs were amputated, mid-thigh. Expert medical testimony affirmed that the delay in the follow up of the patient's complaints was an important contributing factor in the need for bilateral amputations.

Tunnel Vision

Tunnel vision—that narrowing of perception that causes one to look at the patient as a specialty problem rather than as a total human being, complex and variable. Tunnel vision—that narrow outlook that causes one to fail to recognize the need for the assistance of another physician's opinion, of consultation, and further diagnostic studies and to look beyond the first and obvious causal factors.

Case A A man was brought to the hospital with an abdominal bullet wound. X-rays disclosed that the bullet was lodged near

(Continued on Page 731)

"The history of science, and in particular the history of medicine... is... the history of man's reactions to the truth, the history of the gradual revelation of truth, the history of the gradual liberation of our minds from darkness and prejudice."

—George Sarton, from "The History of Medicine Versus the History of Art"

Are there significant differences in bioavailability and clinical predictability among drug products?

Opinion

Results of a questionnaire to 7,000 physicians:

44.6%

Agree there is a significant difference

24.9%

Believe there is no difference

30.5%

Had no opinion

Are there significant differences in bioavailability and clinical predictability among drug products?

Teacher of Medicine

Alfred Gilman, Ph.D.
Wm. S. Lasdon
Professor & Chairman
Department of
Pharmacology
Albert Einstein
College of Medicine of
Yeshiva University



I think that there can be a very great distinction between generic drugs and brand name drugs. And that applies to products of original research that have outlived their patent protection as well as to drugs that have long been in the public domain. Let me explain why.

The Importance of the Manufacturing Environment

In terms of formulation, quality control, and the ability to reproduce an essentially identical product, batch after batch, I doubt that many firms are properly equipped to put out a product that is as carefully controlled as the product marketed by a pharmaceutical company with sophisticated research and high quality manufacturing facilities. For example, when a company comes out with its own preparation of a drug that has just lost its patent protection, there is no assurance that the drug it produces will be a therapeutic equivalent. The raw material could be identical and yet bioavailability might vary from complete unavailability to that which is equivalent to the original.

It Isn't Enough to Meet USP and NF Standards

Meeting USP and NF standards is not enough to guarantee therapeutic equivalence. In certain instances, stricter standards must be applied. Right now, the New York Heart Association has a committee that is studying the problem of digoxin equivalent

lency. I am certain that they are going to recommend a bioavailability assay of a particular digoxin. Unless this is done, they will not recommend it for purchase or use in New York City hospitals. It represents too much of a hazard. They have gone so far as to recommend a batch-by-batch certification of bioavailability even though the company has been reproducing and marketing a digoxin product through the years.

The Problem of Controlling Bioavailability of Generics

The FDA does not have the manpower to inspect the quality control capabilities of hundreds of houses specializing in generic products. And I don't think that the average pharmacist is knowledgeable or aware of the quality and bioavailability of the infinite numbers of generic preparations. A recommendation has been made that every time a generic house (or for that matter a large pharmaceutical company) markets an already existing drug for the first time, a modified new drug application should be submitted. The manufacturer would have to show that his compound is the therapeutic equivalent of the standard compound in use, assuming that the standard compound is one that has been available for an extended period—say 15 years. This would be one indication that the control of bioavailability is beginning to get the attention that it deserves.

Clinical Predictability More Important Than Price

Although the question of price has been greatly exaggerated, it is true that patients can on occasion save money on generic drugs. But you are not going to dare attempt to save money if it jeopardizes patient's health. Let us turn to the example of cardiac glycosides. These drugs have become very prominent in recent years, that is, cardiac glycosides. These are probably the most expensive drugs we use with respect to the small difference between a maximally effective dose and a toxic dose. When you are dealing with a drug of this type, the first concern must be clinical predictability. At the time of variations in bioavailability, it would be sheer folly to try to save the patient what might amount to maybe \$10 or \$20 a month. The physician cannot age his patient unless he is sure that the drug prescribing has the positive effect each time the prescription is renewed. This is especially significant when the patient is on the product, not for a short time but for the rest of his

Maker of Medicine

C. J. Cavallito, Ph.D.
Executive Vice President
Ayerst Laboratories



minimize nonequivalence of drug components produced by different manufacturers. Arguments relate largely to the extent of product inequivalences. Experience over the past six years has uncovered a greater incidence of nonequivalence of products prepared by different manufacturers from generically equivalent substances than many had previously surmised.

Newer Bioavailability Studies Reveal Differences

Bioavailability may be defined as a measure of the rate and amount of absorption of a drug substance from its administered dosage form. For several years pharmaceutical scientists have proposed that bioavailability data on presumably equivalent dosage forms provide the best measure of product equivalence—short of adequate clinical trial. In their continued search for shortcuts to the evaluation of product equivalence, medical and pharmaceutical scientists have increasingly relied upon bioavailability characteristics as reflected by blood levels of a drug after its administration to human subjects.

Leading manufacturers now conduct comparative bioavailability studies on their own product dosage forms after production process changes that would have been considered inconsequential a few years ago. This isn't surprising, since there are so many possible differences in production operations that the opportunities for inequiva-

lent generic and brand name products are numerous—even when the production process begins with identical chemical substances. Moreover, reputable manufacturers are striving to improve *in vitro* control measures, such as dissolution characteristics, which are being related more meaningfully to bioavailability reference data.

As a result of advances in scientific instrumentation and analytical methodology which permit measurements of small quantities of drug substances in the body, our abilities to detect differences in bioavailability and possible therapeutic nonequivalence have appreciably improved.

Product Selection

Based on Patient Response

Improved specifications and standards can better assure the equivalence of *drug substances*. Manufacturers, compendia and regulatory agencies can all play a part. However, it is the *drug product*, not the *drug substance*, that the physician, pharmacist, nurse and patient-customer utilize. How can these indi-

viduals make or influence specific product selections to minimize variations in therapeutic equivalence of multisource drugs? Patients' responses to a drug product provide a basis of experience to aid the physician in his selection of a particular product. The nurse and pharmacist can also help detect patient responses, but ultimate responsibility must remain with the physician.

Reputation of Manufacturer as Basis for Product Selection

The physician, to assure that his patients receive quality health care, must rely upon the capabilities of the reputable pharmaceutical manufacturer who is equipped to develop, prepare and control a quality product of uniform, reliable therapeutic performance. Substitution with purportedly equivalent generic products that are only superficially evaluated by an imitator manufacturer can place the health of the patient secondary to factors of price or convenience for the provider.

Opinion & Dialogue

What is your opinion, doctor?
We would welcome your comments.



The Pharmaceutical Manufacturers Association
1155 Fifteenth Street, N.W., Washington, D.C. 20005

Although equivalence of different preparations of a substance may be defined by certain physical, chemical or biological characteristics, identity is not always assured even though the characteristics may be described in compendia as the USP, NF or defined by other specific standards. Moreover, even with equivalent substances, similar pharmaceutical products can be produced by different manufacturers such that these products are bioequivalent or therapeutically equivalent.

Growing Awareness of Potential for Nonequivalence

As experience increases with drug substances derived from different sources under different conditions, it should be possible to establish specifications in sufficient detail to minimize the potential for their nonequivalence. However, until there is general agreement on product therapeutic equivalence would still not be assured even if one could

Integument!

Our skin—the human integument—covers us, defines us, protects us. But skin is subject to cuts, burns, abrasions. And infections. Neosporin Ointment fights infection by providing broad antibacterial action against susceptible skin invaders. It contains antibiotics that are rarely used systemically, reducing the risk of sensitization.

INDICATIONS: *Therapeutically*, used as an adjunct to appropriate systemic therapy for topical infections, primary or secondary, due to susceptible organisms, as in:

- infected burns, skin grafts, surgical incisions, otitis externa
- primary pyodermas (impetigo, ecthyma, sycosis vulgaris, paronychia)
- secondarily infected dermatoses (eczema, herpes, and seborrheic dermatitis)
- traumatic lesions, inflamed or suppurating as a result of bacterial infection.

Prophylactically, the ointment may be used to prevent bacterial contamination in burns, skin grafts, incisions, and other clean lesions. For abrasions, minor cuts and wounds accidentally incurred, its use may prevent the development of infection and permit wound healing.

CONTRAINDICATIONS: Not for use in the external ear canal if the eardrum is perforated. This product is contraindicated in those individuals who have shown hypersensitivity to any of the components.

PRECAUTION: As with other antibiotic preparations, prolonged use may result in overgrowth of nonsusceptible organisms and/or fungi. Appropriate measures should be taken if this occurs. Articles in the current medical literature indicate an increase in the prevalence of persons allergic to neomycin. The possibility of such a reaction should be borne in mind.

Complete literature available on request from Professional Services Dept. PML.

NEOSPORIN[®] Ointment

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Each gram contains: Aerosporin[®] brand Polymyxin B Sulfate 5,000 units; zinc bacitracin 400 units; neomycin sulfate 5 (equivalent to 3.5 mg. neomycin base); special white petrolatum q.s. In tubes of 1 oz. and ½ oz. and ¼ oz. (approx.) foil packages.



Wellcome

Burroughs Wellcome Co.
Research Triangle Park
North Carolina 27709

(Continued from Page 726)

the spine. The surgeon, finding a large amount of blood in the abdominal cavity, located a lacerated liver which appeared to be the source of hemorrhage. After repairing the liver laceration, he removed the bullet and closed the incision. Several hours later, the patient went into shock. The dressings were found to be saturated with fresh blood, therefore the patient was returned to surgery. On this second exploratory, fecal material was found in the abdomen. Further exploration revealed a large hole in the intestine. This discovery came too late; the patient died in the operating room.

Haste Makes Waste

Damage to anatomical structures during the course of a surgical procedure has led to serious trouble, even to the deaths of patients. The little time you save by hurrying can be costly to both you and the patient. Take that extra time, know where you are, what you are cutting, and what structures might be surrounding your operative site.

Case A patient had a relatively minor chronic ulcer on her leg. Conservative methods failed to bring about any measure of improvement. It was decided to excise the ulcer and perform a lumbar sympathectomy. During the recovery period, the patient went into renal failure and died. Autopsy revealed that the left ureter had been removed when it was mistakenly identified as being part of the sympathetic chain.

Is This Trip Necessary?

Often patients are not too happy with the results of the surgery, especially when, in their eyes, there has been little or no improvement. The difference to the patient is not how technically successful the procedure, but how much better he feels. In considering surgery, a number of questions need to be asked: What are the chances for improvement from the patient's viewpoint? Have all the alternatives been clearly explained to

the patient? Has the patient's age and general condition been considered in the evaluation? Have all the diagnostic procedures needed for a clear picture of the patient's condition been carried out?

Case A 19-year-old boy wanted a tattoo removed from his wrist. The physician told him the tattoo could be removed with only a small scar resulting and that even this would fade in time. The tattoo was removed, but the scar thickened and a keloid formed. This necessitated a skin graft for removal. The suit charged the physician with not producing results as expected or guaranteed.

Are You On The Same Wave Length?

The visit to the physician is a traumatic experience for most people. Fear is present in all patients to a greater or lesser degree and is compounded when you confirm their fears by something you have said or not said. The explanations, the instructions that you give are somehow shorted out because in fear it is hard to think of anything other than the fear.

Consider giving the patient written instructions or explanatory materials, that can be read later in a more familiar surrounding, to re-enforce the oral explanation. Be sure to make your explanation in words that can be easily understood by the patient. Assure the patient, but give him a fair evaluation of his condition. Handle the patient and his family as you would want yourself or your family to be handled. An informed patient is a better patient, so be sure you are both tuned in on the same wave length.

Case A 13-year-old boy sustained a leg fracture while playing ball. X-rays demonstrated fractures of both the tibia and fibula. Doctor K reduced the fractures and applied a long leg plaster cast. In their anxiety, the only instructions that the parents heard the physician give was to call the physician's office for an appointment in three weeks. The boy, an active youngster, began weight-bearing before the

three weeks were up. This caused some displacement and necessitated realignment. He was left with a one-half inch shortening of the leg. The parents charged the physician with not telling them that their son was not to walk on the cast prior to the first checkup and thereby causing the need for realignment and the leg shortening.

Check and Double Check

Check and double check the operative site before you make your decision; carefully inspect the incision before you close. You may be held responsible for sponges, instruments, and needles left in the wound, no matter what the count. You may be held responsible if you operate at the wrong site, no matter what the reason. You are responsible for your medical orders and possibly for their execution.

Case Mrs. M entered the hospital for a bowel resection because of a malignant tumor and for removal of her non-functioning gallbladder. The surgery was done and the patient was discharged from the hospital. Several months later, the patient developed symptoms of another bowel obstruction and metastasis of the malignancy was feared. She again entered the hospital and again had surgery. Bowel obstruction? Yes. Metastasis? No! What caused the obstruction? It was a lap sponge left during the original surgery.

Summary

Don't dismiss the contents of this report as isolated horror stories! One of the true horrors is that the report contains examples of recurring problems. Don't say "It can't happen to me." It can. Most of the reported cases happened to surgeons of long standing who probably said it couldn't happen to them, but it did. Only constant awareness of these problems and consistent preventive efforts can lessen the chances for these accidents happening. To borrow and paraphrase Smokey, the Bear—"Only you can prevent patient injuries."

"Sights And Sounds"

The Continuing Medical Education Department of the Medical Association of the State of Alabama will be providing information on a monthly basis about the availability of films, film strips, tapes, etc., that deal with medical topics and might be of interest to members of this Association. This information will be a regular feature of the *Journal*.

Ayerst Laboratories is offering as a service to the medical profession, two films that deal with estrogen deficiency in the menopause and later years. These films are available free of charge.

The first film is entitled, *The Psychohormonal Aspects of the Menopause*. Using patient interviews, discussion, and laboratory demonstrations, the film covers the psychoendocrine field.

The second film, *Postmenopausal Osteoporosis: Differential Diagnosis and Treatment—A Study of 1,545 Patient Years*, provides an excellent review of the nature and extent of postmenopausal osteoporosis. The film covers differential diagnosis, as well as estrogen replacement therapy for symptomatic relief and to help regard the osteoporotic process.

Ayerst believes these films will be of interest and value and hopes medical groups will order them for viewing. To obtain these films contact:

Ayerst Laboratories
Division of American Home
Products Corporation
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685 Third Avenue
New York, New York 10017

There were 112 medical schools in the United States in 1972, compared with 86 in 1960.

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All Mudranes are bronchodilator-mucolytic in action, and are indicated for symptomatic relief of bronchial asthma, emphysema, bronchiectasis and chronic bronchitis. **MUDRANE tablets** contain 195 mg. potassium iodide; 130 mg. aminophylline; 21 mg. phenobarbital (Warning: may be habit-forming); 16 mg. ephedrine HCl. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline-phenobarbital-ephedrine combinations. **Iodide side-effects:** May cause nausea. Very long use may cause goiter. Discontinue if symptoms of iodism develop. **Iodide contraindications:** Tuberculosis; pregnancy (to protect the fetus against possible depression of thyroid activity). **MUDRANE-2 tablets** contain 195 mg. potassium iodide; 130 mg. aminophylline. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline. **Iodide side-effects and contraindications** are listed above. **MUDRANE GG tablets** contain 100 mg. glyceryl guaiacolate; 130 mg. aminophylline; 21 mg. phenobarbital (Warning: may be habit-forming); 16 mg. ephedrine HCl. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline-phenobarbital-ephedrine combinations. **MUDRANE GG-2 tablets** contain 100 mg. glyceryl guaiacolate; 130 mg. aminophylline. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions:** Those for aminophylline. **MUDRANE GG Elixir.** Each teaspoonful (5 cc) contains 26 mg. glyceryl guaiacolate; 20 mg. theophylline; 5.4 mg. phenobarbital (Warning: may be habit-forming); 4 mg. ephedrine HCl. **Dosage:** Children, 1 cc for each 10 lbs. of body weight; one teaspoonful (5 cc) for a 50 lb. child. Dose may be repeated 3 or 4 times a day. Adult, one tablespoonful, 4 times daily. All doses should be followed with $\frac{1}{2}$ to full glass of water. **Precautions:** See those listed above for Mudrane GG tablets.

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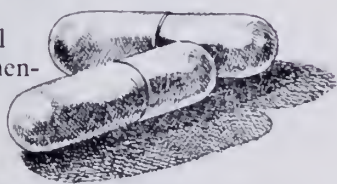
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You carry one of the heaviest patient loads in the country. Since this may include a number of patients with gastritis and duodenitis... you should know more about Librax®

Helps reduce anxiety-related G.I. symptoms

A patient may blame his attacks of gastritis or duodenitis on "something he ate" but contributing factors may be his job, marital problems, financial worries or some other unmentioned source of stress and excessive anxiety that exacerbated the condition. Whether it is "something he ate" or "something eating him," adjunctive Librax can help. Librax offers both the antianxiety action of Librium® (chlordiazepoxide HCl), that can help relieve excessive anxiety, and the dependable anticholinergic action of Quarzan® (clidinium Br), that can help reduce gastrointestinal hypermotility and hypersecretion.



Patient-oriented dosage — up to 8 capsules daily in divided doses

For optimal response, dosage can be adjusted to suit patient needs—1 or 2 capsules, 3 or 4 times a day.

To help relieve anxiety-linked symptoms in gastritis and duodenitis

adjunctive Librax®



Each capsule contains 5 mg chlordiazepoxide HCl and 2.5 mg clidinium Br.

Before prescribing, please consult complete product information, a summary of which follows:

Contraindications: Patients with glaucoma; prostatic hypertrophy and benign bladder neck obstruction; known hypersensitivity to chlordiazepoxide hydrochloride and/or clidinium bromide.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering Librium (chlordiazepoxide hydrochloride) to known addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards. As with all anticholinergic drugs, an inhibiting effect on lactation may occur.

Precautions: In elderly and debilitated, limit dosage to smallest effective amount to preclude development of ataxia, oversedation or confusion (not more than two capsules per day initially; increase gradually as needed and tolerated). Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients. Employ usual precautions

in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: No side effects or manifestations not seen with either compound alone have been reported with Librax. When chlordiazepoxide hydrochloride is used alone, drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally with chlordiazepoxide hydrochloride, making periodic blood counts and liver function tests advisable during protracted therapy. Adverse effects reported with Librax are typical of anticholinergic agents, i.e., dryness of mouth, blurring of vision, urinary hesitancy and constipation. Constipation has occurred most often when Librax therapy is combined with other spasmolytics and/or low residue diets.

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

The American College of Obstetricians and Gynecologists

Statement on Abortion, February 10, 1973

In view of the recent decision of the United States Supreme Court on abortion the following statement is issued by the Executive Committee of The American College of Obstetricians and Gynecologists.

Abortion is a surgical procedure. For its performance, adequate facilities, equipment and personnel are required to assure the highest standards of patient care.

First trimester abortions (up to 12 weeks gestational age) should be performed in a hospital or in a facility that offers the basic safeguards provided by hospital admission and has immediate hospital back-up. Such a facility should be accredited by the Joint Commission on Accreditation of Hospitals or licensed by a state or province.

Abortions beyond the first trimester should be performed in a hospital.

Facilities for the performance of first trimester abortions should include appropriate surgical, anesthetic and resuscitation equipment. In addition, the following should be provided:

1. Verification of the diagnosis and duration of pregnancy.
2. Pre-operative instructions and counselling.
3. Recorded pre-operative history and physical examination, particularly directed to identification of pre-existing or concurrent illnesses or drug sensitivities that may have a bearing on the operative procedures or the anesthesia.
4. Laboratory procedures as usually required for a hospital admission, including blood type and Rh factor.
5. Prevention of Rh sensitization.
6. A receiving facility where the patient may be prepared and receive neces-

sary pre-operative medication and observation prior to the procedure.

7. A recovery facility in which the patient can be observed until she has sufficiently recovered from the procedure and the anesthesia and can be safely discharged by the physician.
8. Post-operative instructions and arrangements for follow-up including family planning advice.
9. Adequate permanent records.

It is recognized that abortion may be performed at a patient's request or upon a physician's recommendation. No physician should be required to perform, nor should any patient be forced to accept an abortion.

The usual informed consent, including operative permit, should be obtained. The same indications for consultation should apply to abortions as to other medical-surgical procedures.

Abortion should be performed only by physicians who are qualified to identify and manage those complications that may arise from the procedure.

It is important that the provision of abortion services not interfere with the care of other obstetric-gynecologic patients or with residency training programs in obstetrics and gynecology. Consideration should be given by hospitals to providing facilities where abortions can be performed with minimal disruption of other hospital functions.

There were an estimated 345,000 physicians in the United States at the start of 1972, according to the American Medical Association. This represents a ratio of one doctor for every 612 Americans, compared with one for every 712 in 1960.

Skin And Burn Patients

WASHINGTON, D. C.—Japanese researchers have developed a "skin" that they feel will shorten tissue repair of burns and skin wounds by preventing dehydration and infection, according to the National Society for Medical Research.

Scientists at Tokyo University and Nippon Hikaku Kaisha (Japan Leather Company) say their skin material is immune to rejection. It is made by breaking down bovine collagen—a substance found in connective tissue, bone and cartilage—with various enzymes. The material is then rearranged chemically to make it unreactive.

The new skin has drastically reduced hospitalization time for burn and skin wound patients.

Whitetail Deer and Sickle Cell Anemia

According to the National Society for Medical Research, University of Florida researchers have been using whitetail deer as part of a study of sickle cell anemia, a genetic disorder found chiefly among members of the Black race.

Dr. W. Jape Taylor, president of the Southern Society for Clinical Investigation, says these deer are the only animals to display the same kind of sickling of red blood cells as that which is found in humans.

He points out that the deer do not actually develop sickle cell anemia. The bizarre shape of the red blood cells in the animals seems to be related to particular chemical properties of the hemoglobin.

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"Hidden" Hypertension Challenge For Medicine

A potentially disabling, often fatal disease affects untold thousands of Americans. And many of the victims don't know they have the ailment.

The disease is hypertension—high blood pressure. Medically, it is described as, "a disorder of unknown origin, characterized primarily by an elevated diastolic blood pressure, associated with generalized arteriolar vasoconstriction."

In plain words, that means small arteries being squeezed to the point of the sufferer's discomfort, from fatigue or headaches; to his disability, from heart disease, stroke or kidney trouble, or to his death from those conditions.

High blood pressure, "with its regular accompaniment, atherosclerosis (clogged arteries) is the most important numerically of all diseases in the United States," says Dr. Irvine H. Page of the Cleveland Clinic, prominent heart specialist and an authority on hypertension.

There is an "urgent need" to get control of this uncontrolled disorder, says a recent report in the *Journal of the American Medical Association*.

And the AMA itself, in conjunction with government, is mapping out ways of doing just that, says Dr. William R. Barclay, assistant executive vice president of the association.

However, early hypertension presents a special challenge, he added. Since many of those who have it show no symptoms at all, and go along quite happily, there is no recognized urgency about the disease, Dr. Barclay said.

"That's the big hang-up," he said. "Convincing physicians and patients of the worth of treating early hypertension in order to prevent serious trouble later on."

The worth of such treatment was strik-

ingly demonstrated in a study directed by Dr. Edward D. Freis of Washington, D. C., several years ago. It was carried out in veterans hospitals across the country, on patients with diastolic pressure between 115 and 129. (Diastolic is the lower half of the blood pressure reading; systolic the upper half. A reading of 120-over-80 is normal).

The Freis study sought to gauge the value of drug treatment in mild hypertension, to prevent later illness or death. Such treatment has long been a subject of dispute in medicine.

But the study presents a potent argument in favor of preventive therapy.

Half of the 143-patient trial group got anti-hypertension drugs and the other half got a placebo ("sugar pill"). Neither patients nor doctors knew who got what. When results were tabulated they showed:

Systolic and diastolic blood pressures "fell promptly and significantly in the treated patients and remained at reduced levels throughout the trial." After 24 months, the treated group had an average drop of 43 millimeters of pressure systolically and almost 30 mm diastolically—in other words, from say, 163/120 to 120/90.

There were four deaths in the untreated group, and none in the treated group. In the placebo group 27 "complicating events" developed, including retinopathy (eye disorder), congestive heart failure, strokes and heart attacks. There were only two such events in the treated group.

The Freis study, Dr. Barclay said, stimulated interest in getting more doctors to treat asymptomatic—no symptoms—hypertension.

The need for treatment was illustrated just recently in a Chicago study, which concluded that more than half of the Chicagoans

(Continued on Page 741)

Maybe the patient's self-diagnosis is right. He could have hay fever. But that bright red nasal mucosa, along with the thick discharge and excoriation around the nares, strongly suggests that the main problem is a cold. Hay fever or another form of allergic rhinitis may or may not be an underlying factor.

If a complete history and examination rule out allergic rhinitis, the long-term outlook will be a lot more favorable than his own "diagnosis" would have indicated.

But right now, whether he's got allergic rhinitis or a cold, he's suffering from the same irritat-

ing symptoms of drip, congestion and stuffiness. Try DIMETAPP EXTENTABS®. They're formulated to relieve these symptoms without much chance of causing drowsiness or overstimulation. Your patients will appreciate the 24-hour relief they can get from just one tablet every 12 hours.

Cold or



Allergy?

Whether it's a cold or an allergy, Dimetapp Extentabs® effectively relieve stuffiness, drip and congestion.

INDICATIONS Dimetapp Extentabs are indicated for symptomatic relief of allergic manifestations of upper respiratory illnesses, such as the common cold, seasonal allergies, sinusitis, rhinitis, conjunctivitis and otitis. In these cases, it quickly reduces inflammatory edema, nasal congestion and excessive upper respiratory secretions, thereby affording relief from nasal stuffiness and postnasal drip.

CONTRAINDICATIONS Hypersensitivity to antihistamines of the same chemical class. Dimetapp Extentabs are contraindicated during pregnancy and in children under 12 years of age. Because of its drying and thickening effect on the lower respiratory secretions, Dimetapp is not recommended in the treatment of bronchial asthma. Also, Dimetapp Extentabs are contraindicated in concurrent MAO inhibitor therapy.

WARNINGS Use in children. In infants

and children, particularly antihistamines. In overdose may produce convulsions and death.

PRECAUTIONS Administer with care to patients with cardiac or peripheral vascular diseases or hyperlipens. Until the patient's response has been determined, he should be cautioned against engaging in operations requiring alertness such as driving an automobile, operating machinery, etc. Patients receiving antihistamines should be warned against possible additive effects with CNS depressants.

Dimetapp Extentabs®

Dimetane® (brompheniramine maleate), 12 mg.; phenylephrine HCl, 15 mg.; phenylpropanolamine HCl, 15 mg.

such as alcohol, hypnotics, sedatives, tranquilizers, etc.

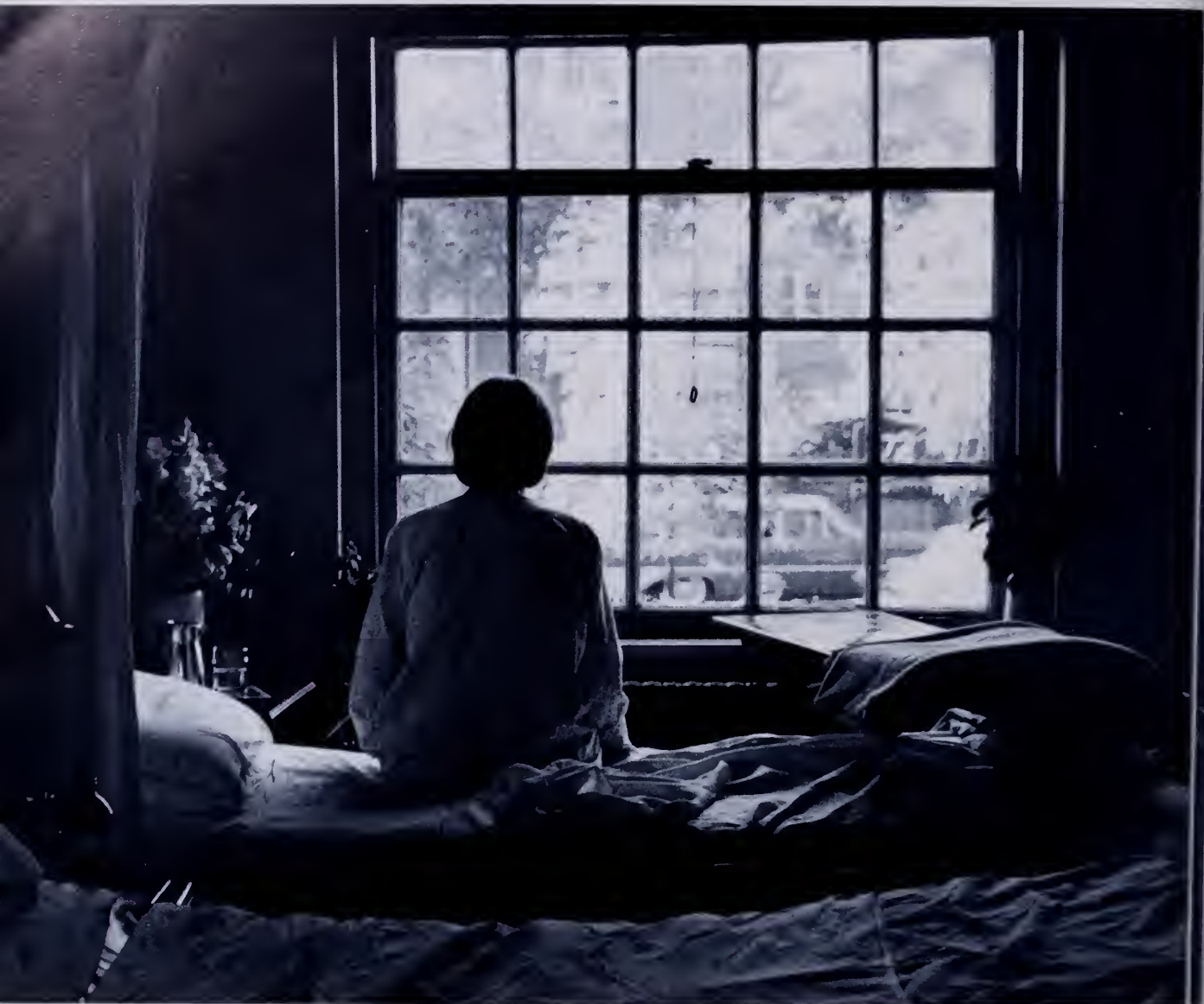
ADVERSE REACTIONS Adverse reactions to Dimetapp Extentabs may include hypersensitivity reactions such as rash, urticaria, leukopenia, agranulocytosis, and thrombocytopenia; drowsiness, lassitude, giddiness, dryness of the mucous membranes, tightness of the chest, thickening of bronchial secretions, urinary frequency and dysuria, palpitation, hypotension/hypertension, headache, faintness, dizziness, tinnitus, incoordination, visual disturbances, mydriasis, CNS-depressant and (less often) stimulant effect, anorexia, nausea, vomiting, diarrhea, constipation, and epigastric distress.

HOW SUPPLIED Light blue Extentabs in bottles of 100 and 500.

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when pain goes on... and on... and on—



For the patient with a terminal illness, PAIN past, present, and future can dominate his thoughts until it becomes almost an obsession. The more he is aware of the pain he is now experiencing, the more difficult it is to erase his memory of yesterday's pain, and to allay his fearful anticipation of tomorrow's pain.


Surely the last thing this patient needs is an analgesic containing caffeine to stimulate the senses and heighten pain awareness. A far more logical choice is Phenaphen with Codeine. The sensible formula provides $\frac{1}{4}$ grain of phenobarbital to take the nervous "edge" off, so the rest of the formula can help control the pain more effectively. Don't you agree, Doctor, that psychic distress is an important factor in most of your terminal and long-term convalescent patients?

the analgesic formula that calms instead of caffeinates

Phenaphen[®] with Codeine

Phenaphen with Codeine No. 2, 3, or 4 contains: Phenobarbital ($\frac{1}{4}$ gr.), 16.2 mg (warning: may be habit forming); Aspirin ($2\frac{1}{2}$ gr.), 162.0 mg; Phenacetin (3 gr.), 194.0 mg; Codeine phosphate, $\frac{1}{4}$ gr. (No. 2), $\frac{1}{2}$ gr. (No. 3) or 1 gr. (No. 4) (warning: may be habit forming).

Indications: Provides relief in severer grades of pain, on low codeine dosage, with minimal possibility of side effects. Its use frequently makes unnecessary the use of addicting narcotics. **Contraindications:** Hypersensitivity to any of the components. **Precautions:** As with all phenacetin-containing products, excessive or prolonged use should be avoided. **Side effects:** Side effects are uncommon, although nausea, constipation and drowsiness may occur. **Dosage:** Phenaphen No. 2 and No. 3—1 or 2 capsules every 3 to 4 hours as needed; Phenaphen No. 4—1 capsule every 3 to 4 hours as needed. For further details see product literature.

 Phenaphen with Codeine is now classified in Schedule III, Controlled Substances Act of 1970. Available on written or oral prescription and may be refilled 5 times within 6 months, unless restricted by state law.

A. H. Robins Company, Richmond, Va. **A-H-ROBINS**

(Continued from Page 738)

who have hypertension don't know it, and four out of 10 who do know aren't being treated.

Of 22,929 industrial employees who volunteered for free tests, 4,625 were found to be suffering from high blood pressure, which for study purposes was considered to be above 95 diastolic and/or 160 systolic.

Almost 60% of those affected were not being treated and denied having been told of the disease prior to screening, although most had seen their doctors in the preceding two years. Thus, either the disease was not being diagnosed or the patients simply were not told by their doctors, the study authors speculated.

It might have been expected, they said, that the VA study and others would have spurred more treatment of hypertension, but this didn't happen.

Making it happen is the aim of the current AMA-federal government plan.

"The AMA has offered to use its prestige and its communications capabilities to sell doctors on the treatment program—through our journals, meetings and other mechanisms," Dr. Barclay said. Information for

the public will be channeled through the AMA's health education department. But Dr. Barclay emphasized that in a nation where people are often lax even in checking out signs of possible cancer, the job will be difficult.

"This (treatment) would involve a person taking pills for the rest of his life, when he does not necessarily feel bad," he said. "The correct medication also will have to be chosen, probably thiazide, and it will have to be cheap. The drugs used in the original (VA) study, for some patients, ran as high as \$2.75 per day—and that is a lot of money to many people, especially for something they don't think they really need."

Physicians may naturally feel reluctant, Dr. Barclay added, to agree to prescribe for hypertension without searching for a possible underlying cause of it—they don't want to feel they might be shortchanging a patient. But for every person who has an underlying cause, such as a disorder of the adrenal gland or abnormal renal (kidney) artery, there will be hundreds with only simple high blood pressure, he said.

"And, in any event, those with an underlying cause will not respond to routine medication, so a thorough examination will be called for," he explained.

Drug Effects on Fetuses

Scientists at the University of Kansas Medical Center have succeeded in developing an animal model that will very much aid studies of the effects of a mother's drug habits on her unborn child.

According to the National Society for Medical Research, Dr. Ralph Kauffman, a pediatrician, says that his group's work with goats should reveal more about potential drug problems with fetuses than work done on mice and rats.

Dr. Kauffman implants tiny tubes in the fetal bladder and heart. A third tube is se-

cured to the inside of the goat's uterus to allow samples of the amniotic fluid to be taken later.

As the fetus develops, the scientists inject the mother goat with various drugs to test their effects on the kid. Fluid samples taken from the tubes aid Dr. Kauffman and his associates in determining if the drugs reach the fetus and what effect they are having on the unborn goat. These studies deal with drugs meant to aid an unborn child as well as the chemicals which may cause deformity or early death.

(Continued from Page 687)

Wanted: General Practitioner or Internist to join active 4-M. D. professional association—3-GP's, 1 Board Surgeon. Modern offices, accredited 75 bed hospital. Beautiful town of 10,000 with excellent churches, schools (public and private). Salary for 3-6 months then arrangement for full partnership. PW-22

General Practitioners—

For town of 2,000 population located in trade area of 15,000 population in northeast Alabama. Nearest metropolitan centers 30 miles distance. Industrial area. Clinic and some office equipment available. Several churches, schools, and civic clubs. PW-23

Opportunity for GP to join well established four-man partnership; three general practitioners and one board certified surgeon. Practice located in city of 8,000 population, trade area of 60,000, north-central Alabama. Modern new partnership-owned offices adjacent to modern 125-bed fully accredited hospital. Salaried first year with possible partnership status at end of first year. PW-27

Wanted, General Practitioner, Orthopedic Surgeon, General Surgeon to replace recently deceased associate, large Industrial Clinic in Birmingham. Modern Office space. Salary negotiable. PW-28

For community of 1,500 population located in south Alabama near city of 12,000 population. Hospitals located within 25 miles. Office space and equipment available. Farming, cattle and textile industries in the area. Several churches and school. Civic clubs and golf courses. PW-1-1

Opportunity for two general practitioners to assist two established GP's in a progressive comprehensive medical program in rural county of 12,500 population. Modern new office building, fully equipped, located in county seat, 20 miles

west of Montgomery, Alabama. Excellent salary. Several churches, school, and recreation areas. PW-1/8

Opportunity in town of 3,000 population located in trade area of 12,000 population in south Alabama. 23-bed hospital. Office space available. Numerous churches and schools. Recreational areas nearby. PW-1/11

Opportunity for associate in general practice or take over general practice in town of 1,200 population in south central Alabama with trade area of 5,000 population. Well established practice and well equipped office. Located near recreational area. PW-1/12

Opportunity in town of 3,000 population in trade area of 15,000 located in West Alabama. Clinic building available with equipment. Farming and several small industries. Several schools and churches. PW-1/13

Opportunity in south Alabama in town of 2,700 population, trade area of 15,000 population. Nearest large city of 30,000 population located 45 miles. Nearest hospital is 10 miles. One physician now engaged in practice in the town. Necessary arrangements will be made for office space, equipment, and housing. Industrial and agricultural area. Churches, schools, civic and social activities. PW-30

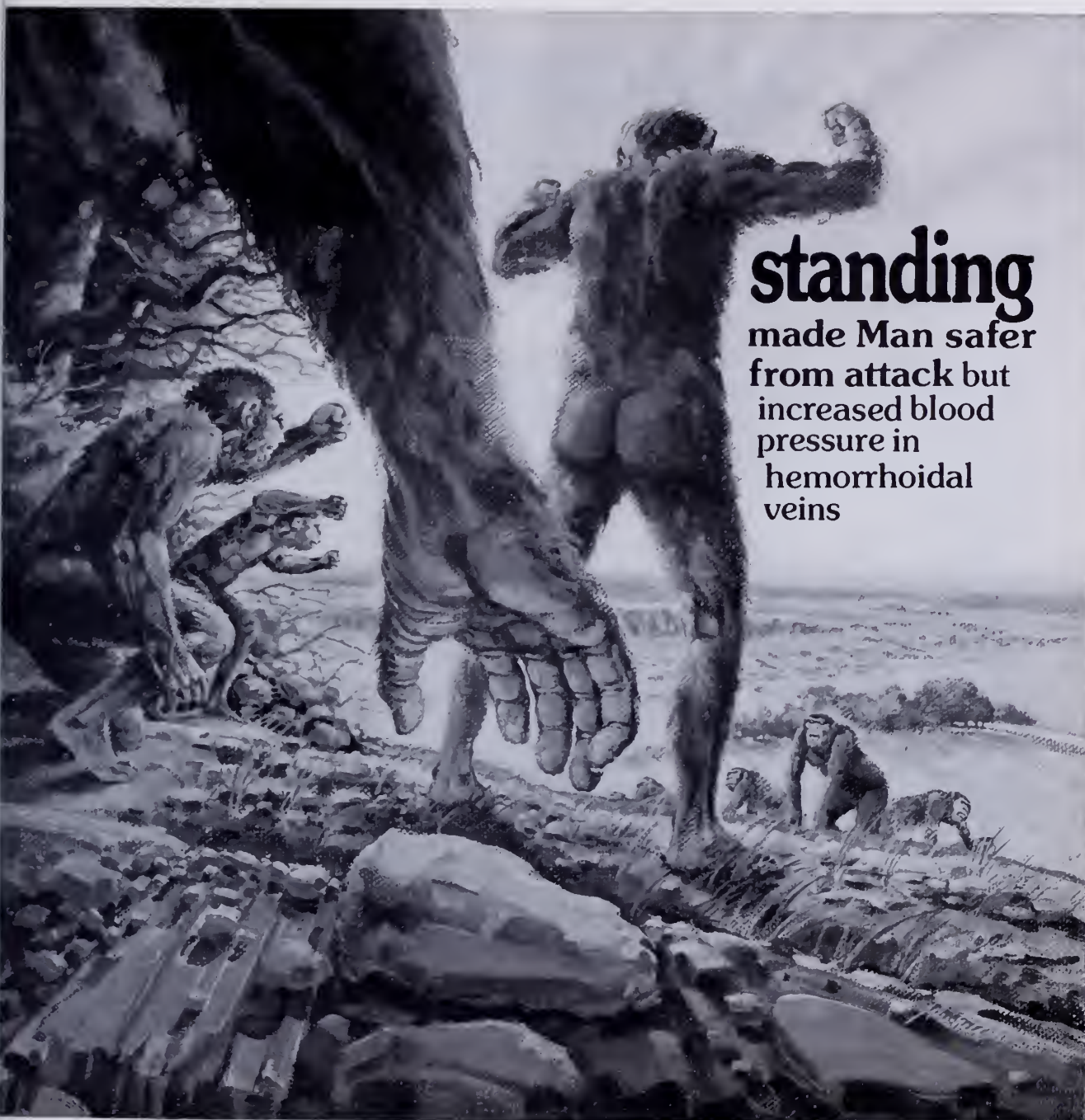
Partner wanted in general practice. Recent death of previous associate. Large family practice located in a suburb of Mobile. Excellent hospitals. PW-31

Opportunity in southeast Alabama in town of 3,000 population, trade area of 15,000 population. Nearest large city, 8 miles, 40,000 population, and 2 large hospitals. Office space and housing readily available. Industrial and agricultural area. Churches, schools, civic and social activities. PW-35

Infant mortality in the United States fell from a rate of 47 per 1,000 live births in 1940 to 18.6 in 1972, the lowest rate ever, according to the National Center for Health Statistics.

The American Medical Association was founded by 250 physicians in Philadelphia in 1847. Membership today exceeds 200,000.

A cabinet-level medical secretary of public health was recommended by the American Medical Association in 1873.



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hemorrhoidal
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ntil the inflammation
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to help ease
acute symptoms of
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comfort

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"Competency To Stand Trial" Reveals Misuse and Confusion

Too many Americans are being inaccurately judged incompetent to stand trial and are unnecessarily committed to mental hospitals, according to a six-year study funded by HEW's National Institute of Mental Health.

The study revealed that these people are not only being denied their right to a speedy trial, but have also been involuntarily committed to mental institutions for excessively long periods of time—an experience which often proves to be both stigmatizing and anti-therapeutic.

The study on competency to stand trial and mental illness was supported by the Center for Studies of Crime and Delinquency of the National Institute of Mental Health, a component of HEW's Health Services and Mental Health Administration.

The report notes that the common law criteria for competency to stand trial relate to three basic concerns: 1) the defendant's understanding of the nature of the proceedings; 2) his understanding of the consequences of the proceedings, and 3) his ability to assist counsel in his own defense.

According to Dr. Saleem A. Shah, Chief of the Center for Studies of Crime and Delinquency, "This research sheds further light in an area in which there has been considerable confusion. The basic common law criteria pertaining to this issue seem in many instances to be poorly understood by psychiatrists as well as by lawyers. The issue of pretrial competency is often confused with that of criminal responsibility—the defendant's mental condition at the time of the act. Moreover, the injection of various psychiatric considerations, as well as the use of legal strategies by attorneys, tend to further confound the basic question about the defendant's competency."

The researchers, members of the Laboratory of Community Psychiatry at Harvard

Medical School, have attempted not only to clarify the numerous issues surrounding pretrial competency but have developed two tests which have been demonstrated to be effective screening instruments for determining competency. Appropriate use of these tests can help in preventing unnecessary admissions to mental hospitals in regard to this issue.

The research team also played an important role in the drafting of Massachusetts' Mental Health Reform Act of 1970. This legislation has had a noticeable impact on that State's competency procedures. Based on statistics of the first six months under the new Act, and projections for the first year, there will be about 1,000 fewer admissions annually to mental hospitals for competency examinations.

Dr. A. Louis McGarry, principal investigator on the project, states, "Inappropriate and unnecessary mental hospitalizations on the competency issue appear to occur in large measure from over-burdened courts seeking alternatives to the penal system. Yet, incompetency to stand trial on the basis of mental illness is relatively rare.

"Further, those who are judged incompetent are usually responsive to treatment, but there seems to be a bias among mental health professionals against returning these defendants to court as promptly as possible. Unless criminal charges can be otherwise disposed of, it is in the best interests of the mentally ill defendants to stand trial as quickly as possible."

Possibly the first anti-pollution effort in the United States occurred in 1876, when the American Medical Association urged states and cities to guard water supplies against contamination.

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Before deciding to make Valium (diazepam) part of your treatment plan, check on whether or not the patient is presently taking drugs and, if so, what his response has been. Along with the medical and social history, this information can help you determine initial dosage, the possibility of side effects and the ultimate prospects of success or failure.

While Valium can be a most helpful adjunct to your counseling, it should be prescribed only as long as excessive psychic tension persists and should be discontinued when you decide it has accomplished its therapeutic task. In general, when dosage guidelines are followed, Valium is well tolerated (see Dosage). For convenience it is available in 2-mg, 5-mg and 10-mg tablets.

Drowsiness, fatigue and ataxia have been the most commonly reported side effects.

Until response is determined, patients receiving Valium should be cautioned against engaging in hazardous occupations requiring complete mental alertness, such as driving or operating machinery.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

Dosage: Individualize for maximum beneficial effect.

Adults: Tension, anxiety and psychoneurotic states, 2 to 10 mg b.i.d. to q.i.d.; alcoholism, 10 mg t.i.d. or q.i.d. in first 24 hours, then 5 mg t.i.d. or q.i.d. as needed; adjunctively in skeletal muscle spasm, 2 to 10 mg t.i.d. or q.i.d.; adjunctively in convulsive disorders, 2 to 10 mg b.i.d. to q.i.d. **Geriatric or debilitated patients:** 2 to 2½ mg, 1 or 2 times daily initially, increasing as needed and tolerated. (See Precautions.) **Children:** 1 to 2½ mg t.i.d. or q.i.d. initially, increasing as needed and tolerated (not for use under 6 months).

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including aplastic anemia, may occur suddenly despite regular hemograms, and may become manifest days or weeks after cessation of drug. Any significant change in total white count, relative decrease in granulocytes, appearance of immature forms, or fall in hematocrit should signal immediate cessation of therapy and complete hematologic investigation. Unexplained bleeding involving CNS, adrenals, and GI tract has occurred. The drug may potentiate action of insulin, sulfonylurea, and sulfonamide-type agents. Carefully observe patients taking these agents. Nontoxic and toxic goiters and myxedema have been reported (the drug reduces iodine uptake by the thyroid). Blurred vision can be a significant toxic symptom worthy of a complete ophthalmological examination. Swelling of ankles or face in patients under sixty may be prevented by reducing dosage. If edema occurs in patients over sixty, discontinue drug. **Precautions:** The following should be accomplished at regular intervals: Careful detailed history for disease being treated and detection of earliest signs of adverse reactions; complete physical examination including check of patient's weight; complete weekly (especially for the aging) or an every two week blood check; pertinent laboratory studies. Caution patients about participating in activity requiring alertness and coordination, as driving a car, etc. Cases of leukemia have been reported in patients with a history of short- and long-term therapy. The majority of these patients were over forty. Remember that arthritic-type pains can be the presenting symptom of leukemia. **Adverse Reactions:** This is a potent drug; its misuse can lead to serious results. Review detailed information before beginning therapy. Ulcerative esophagitis, acute and reactivated gastric and duodenal ulcer with perforation and hemorrhage, ulceration and perforation of large bowel, occult GI bleeding with anemia, gastritis,

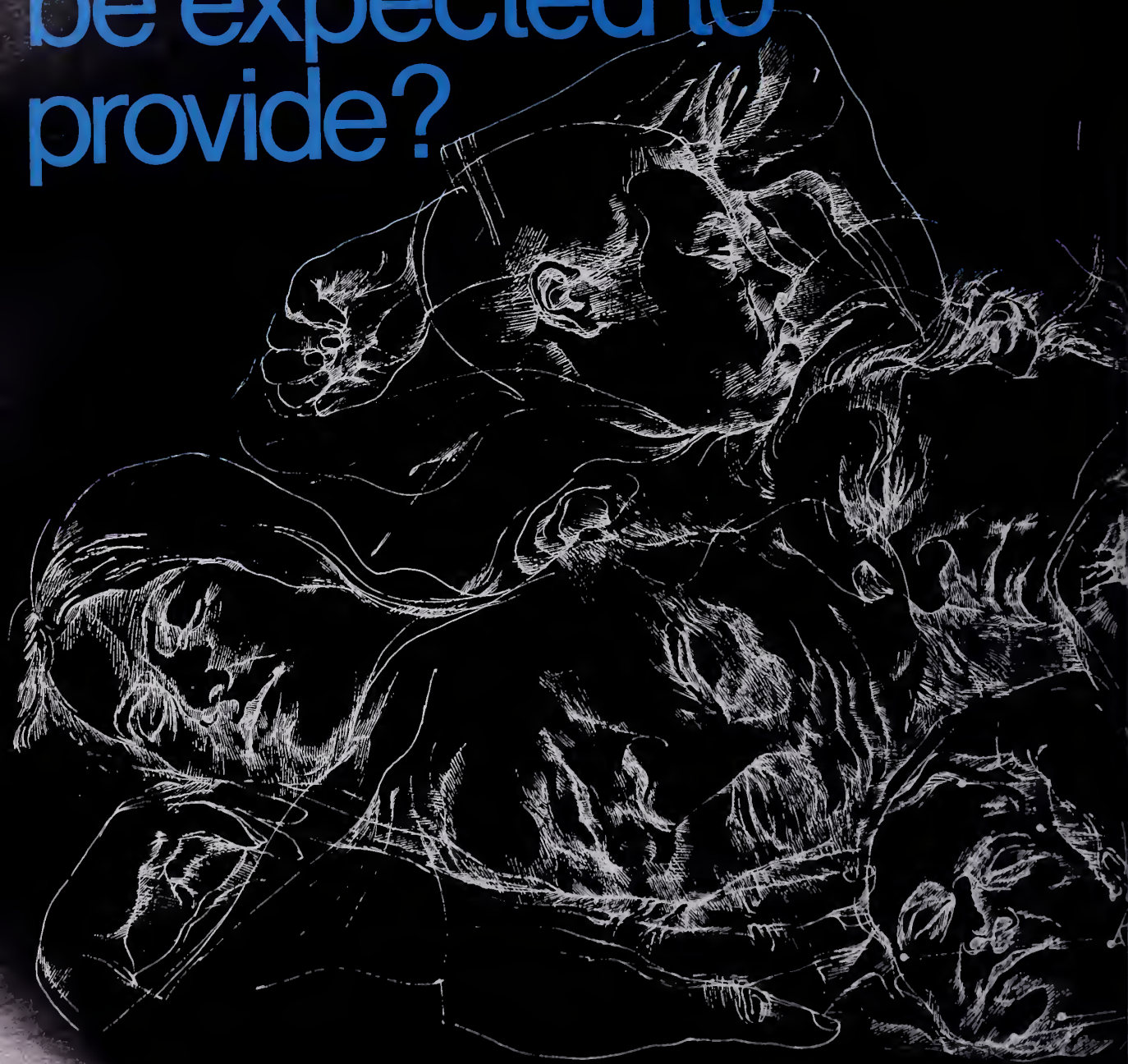
epigastric pain, hematemesis, dyspepsia, nausea, vomiting and diarrhea, abdominal distention, agranulocytosis, aplastic anemia, hemolytic anemia, anemia due to blood loss including occult GI bleeding, thrombocytopenia, pancytopenia, leukemia, leukopenia, bone marrow depression, sodium and chloride retention, water retention and edema, plasma dilution, respiratory alkalosis, metabolic acidosis, fatal and nonfatal hepatitis (cholestasis may or may not be prominent), petechiae, purpura without thrombocytopenia, toxic pruritus, erythema nodosum, erythema multiforme, Stevens-Johnson syndrome, Lyell's syndrome (toxic necrotizing epidermolysis), exfoliative dermatitis, serum sickness, hypersensitivity angitis (polyarteritis), anaphylactic shock, urticaria, arthralgia, fever, rashes (all allergic reactions require prompt and permanent withdrawal of the drug), proteinuria, hematuria, oliguria, anuria, renal failure with azotemia, glomerulonephritis, acute tubular necrosis, nephrotic syndrome, bilateral renal cortical necrosis, renal stones, ureteral obstruction with uric acid crystals due to uricosuric action of drug, impaired renal function, cardiac decompensation, hypertension, pericarditis, diffuse interstitial myocarditis with muscle necrosis, perivascular granuloma, aggravation of temporal arteritis in patients with polymyalgia rheumatica, optic neuritis, blurred vision, retinal hemorrhage, toxic amblyopia, retinal detachment, hearing loss, hyperglycemia, thyroid hyperplasia, toxic goiter, association of hyperthyroidism and hypothyroidism (causal relationship not established), agitation, confusional states, lethargy; CNS reactions associated with overdosage, including convulsions, euphoria, psychosis, depression, headaches, hallucinations, giddiness, vertigo, coma, hyperventilation, insomnia; ulcerative stomatitis, salivary gland enlargement. (B)98-146-070-G

Serious side effects do occur. Select patients carefully (particularly the elderly) and follow them closely in line with the drug's precautions, warnings, contraindications and adverse reactions.

For complete details, including dosage, please see full prescribing information.

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What should a medication for sleep be expected to provide?



Before prescribing Dalmane (flurazepam HCl), please consult Complete Product Information, a summary of which follows:

Indications: Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening; in patients with recurring insomnia or poor sleeping habits; and in acute or chronic medical situations requiring restful sleep. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or

recommended.

Contraindications: Known hypersensitivity to flurazepam HCl.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Use in women who are or may become pregnant only when potential benefits have been weighed against possible hazards. Not recommended for use in persons under 15 years

of age. Though physical and psychological dependence have not been reported with recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated patients, initial dosage should be limited to 15 mg to preclude oversedation, dizziness, or ataxia. If combined with other drugs having hypnotic or CNS-depressant effects, consider potential additive effects. Employ usual precautions in patients who are severely depressed, or with

Sleep for 7 to 8 hours without need to repeat dosage during the night

No sleep medication has been as rigorously evaluated in the sleep research laboratory as Dalmane. Insomnia patients given one 30-mg capsule of Dalmane at bedtime, on average: fell asleep within 17 minutes, had fewer nighttime awakenings, spent less time awake after sleep onset, and slept for 7 to 8 hours with no need to repeat dosage during the night.

Sleep with consistency

Dalmane (flurazepam HCl) has been shown to be consistently effective even during consecutive nights of administration. Thus there is little likelihood for the need to increase dosage to maintain therapeutic effect.

Dalmane is in a class by itself. Not a narcotic, barbiturate or methaqualone, Dalmane is the only available benzodiazepine specifically indicated for insomnia.

Sleep with relative safety

Chronic tolerance studies have confirmed the relative safety of Dalmane (flurazepam HCl); no depression of cardiac or respiratory function was noted in patients administered recommended or higher doses for as long as 90 consecutive nights. In most instances when adverse reactions were reported they were mild, infrequent and seldom required discontinuance of therapy. Morning "hang-over" with Dalmane has been relatively infrequent. Dizziness, drowsiness, lightheadedness and the like have been the side effects noted most frequently, particularly in the elderly and debilitated. (An initial dose of Dalmane 15 mg should be prescribed for these patients.)

When your evaluation of insomnia indicates the need for a sleep medication, consider Dalmane—a single entity agent proved effective and relatively safe for relief of insomnia.

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(flurazepam HCl)

When restful sleep is indicated

One 30-mg capsule *h.s.*—usual adult dosage

(15 mg may suffice in some patients).

One 15-mg capsule *h.s.*—initial dosage for elderly or debilitated patients.

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at depression or suicidal tendencies. periodic blood counts and liver and kidney function tests are advised during prolonged therapy. Observe usual precautions in presence of impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia, falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported.

Also reported were headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech,

confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase. Paradoxical reactions, *e.g.*, excitement, stimulation and hyperactivity, have also been reported in rare instances.

Dosage: Individualize for maximum beneficial effect. *Adults:* 30 mg usual dosage; 15 mg may suffice in some patients.

Elderly or debilitated patients: 15 mg initially until response is determined.

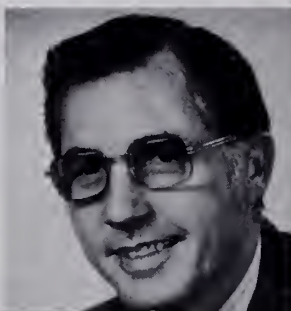
Supplied: Capsules containing 15 mg or 30 mg flurazepam HCl.

Opinion & Dialogue

"Prescription drugs – who should determine the maker?"

Dispenser of Medicine

Clifton J. Latiolais
President
American
Pharmaceutical
Association



Maker of Medicine

C. Joseph Stetler
President
Pharmaceutical
Manufacturers
Association



"Too many doctors are indifferent to the economic consequences of their decisions." So stated a recent issue of *Medical News Report* (December 4, 1972), an independent weekly newsletter published by former AMA Chief Executive F. J. L. Blasingame, M.D.

Doctor, are you indifferent...?

In discussing an anticipated increase in Blue Shield rates, Dr. Blasingame's newsletter had this to say:

"In general, it can be said, MDs have given the impression they are not particularly concerned with the increase in cost of health care to the patients..."

"True, an MD's training is primarily scientific, but in the real world of practice, all of his scientific decisions have a price tag, or an economic impact. The economics of health care beckon the practitioner's attention. Concern for economics of medicine

When the pharmacist recommends that a drug product other than the one ordered be dispensed, the prescriber invariably permits the change when he feels the best interests of the patient will be served.

Shortcomings of Pro-Substitution Argument

The fact remains that it is necessary for the prescriber to know that the change is being contemplated, and to be in a position to consent or demur. Without that opportunity, the unilateral decision of the pharmacist made in the absence of clinical knowledge of the patient, could expose him to needless risks, and in addition, jeopardize the relationship between the professions of Pharmacy and Medicine. In my view, there is nothing in the pro-substitution argument that offsets these risks.

The Issue of Drug Knowledge

Substitution advocates claim that the primary justification for changing the rules is the desire to better utilize pharmacists' knowledge about drugs. Yet the pharmacist's task to keep current on the entire field of drug therapy, to some degree puts him at a disadvantage. Most often, a practicing physician will not have expert knowledge of no more than

ould be an obligation of medical practice...

"Medical societies ought to continue continuing campaigns to point out the substantial savings that could be realized thru deductible insurance and protection for catastrophic illness. At the very least, they should, in the patients' interest, question the tactics of any insurance organization that raises health care costs by forcing policyholders to buy insurance they may not need or want and probably won't ever use.

"Too many doctors are indifferent to the economic consequences of their decisions. Too many, for example, habitually hospitalize patients for the convenience of the MD. It's nonsense to deny such habits exist...

"Doctors, thru their medical societies, have unhesitatingly appealed to their patients for support in the fight against government interference with the private practice of medicine. And the public in the past has responded. It's time the American Medical Association and state and local medical societies paid off the debt by decisive action to hold down the cost of medical care."

Cost of Drugs

Insurance rates and hospital charges are only two factors in health

care costs. The cost of drugs—both prescription and nonprescription—is another.

And when it comes to drug costs, the nation's pharmacists are concerned. Through their national professional society, the American Pharmaceutical Association, pharmacists are advising the public to use nonprescription medication cautiously and conservatively, and to seek the advice of their pharmacist before selecting or purchasing such drugs.

Outdated Laws

The pharmacist also is aware that when it comes to prescription drugs, often he has an even greater opportunity to reduce the cost to the patient—with no sacrifice in the quality of the medication dispensed. But in many states, outdated and antiquated laws prevent the pharmacist from engaging in drug product selection. "Drug product selection" simply means that the pharmacist functions in the patient's interest by consciously choosing, from the multiple brands available, a low-cost quality brand of the specific drug to be dispensed in response to the physician's prescription order.

Much *misinformation* has been purposely spread by those who stand to gain financially by maintaining

high drug costs to the public. An endless stream of propaganda has emanated from the drug industry in an effort to persuade the medical profession that these so-called anti-substitution laws should be retained. And as long as these laws are retained, the drug industry will continue its current marketing practices which contribute unnecessarily to high drug costs to patients. These practices also are inviting government agencies to expand their restrictive controls on physicians and pharmacists.

APhA Efforts

As pharmacists, we are concerned about health care costs. We hope that every physician shares our concern on this vital issue, and will give his personal support to the constructive efforts APhA has undertaken in the interest of all patients.

(For a complete discussion of drug product selection, you are invited to request a free copy of the "White Paper on the Pharmacist's Role in Product Selection" from: American Pharmaceutical Association, 2215 Constitution Avenue, N.W., Washington, D.C. 20037.)

30 drugs that he selects to treat the majority of conditions encountered in practice. Moreover, the physician's choice of a specific brand is based on his knowledge of the patient's medical history and current condition, and his experiences with that particular manufacturer's product.

Some substitution proponents have argued that the dispensing of a prescription is a simple two-party transaction between the pharmacist and the patient, and that a substituting pharmacist may avoid even a technical breach of contract by simply notifying the patient that he is making substitution. I would judge that the courts would be sympathetic toward a pharmacist who substituted without physician approval and who undertook a legal defense that seeks to make the patient responsible for the pharmacist's actions.

Reduced Prescription Prices?

Substitution advocates are suggesting to the consumer, and particularly the consumer activist, that reduced prescription prices could follow legalization of substitution. I have seen absolutely no evidence to justify this claim. To the contrary, experience in Alberta, Canada, where substitution is authorized, suggests

the opposite.

Many pharmacists understandably are concerned about the cost of maintaining multiple stocks of similar products. While there is no doubt that inventory costs rise when additional brands are stocked, it would be interesting to know how much they rise, and how many pharmacists actually stock all brands—of, say, ampicillin or tetracycline—or how long they keep "slow moving" products on their shelves before they are returned for credit. To ask that the industry eliminate multiple sources is to ask competitors to stop competing.

Drug Substitution—A License for the Unethical

Anti-substitution repeal would favor "corner cutting" pharmacists and manufacturers. For them, free substitution would be not a right, but a license. As an aftermath, it is quite likely that the confidence of both physicians and patients in the profession of Pharmacy would be eroded, as revelations about the unconscionable behavior of an undisciplined few were magnified in the press or in professional circles.

Summary

In short, what the American Pharmaceutical Association advo-

cates as a broad-spectrum panacea looks to us to be not only a minority view (advocacy of substitution is by no means a uniform policy in Pharmacy), but also an extraordinarily costly and ineffective remedy, whose side effects are odious. We believe (1) that an impressive majority of pharmacists prefer to work with Medicine and with industry, for the consumer, and for the general good, (2) that they seek the privilege to substitute when the patient might gain and when the patient's doctor agrees, and (3) that they seek to work for the resolution of genuine grievances openly and professionally.

(For amplification of PMA views, please write for our booklet, "The Medications Physicians Prescribe: Who Shall Determine the Source?" It is available from: Pharmaceutical Manufacturers Association, 1155 Fifteenth Street, N.W., Washington, D.C. 20005.)

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President's Page

Public Opinion Is The King

I feel that the meeting in Mobile was a most successful meeting. We had very excellent scientific programs. We had very good attendance, and I feel that we have all had an opportunity to improve ourselves both scientifically and socially.

Now that the dust is settled and the Board of Censors Resolution to increase the Board from ten to 18 members has been passed, I feel that we have corrected one of the problems which seems to have been a source of discontent among the membership. With these changes having been done, I hope now that those members who have not, in the past, seen fit to take part in the affairs of this Association will now come forward and do everything possible to advance and preserve organized medicine in this State.

In reflecting the substance of the speeches which have been presented during this session, your President was strongly impressed with the fact that all of our speakers have said directly or indirectly that medicine in general is doing a very good scientific job—but that we are still falling short in our public relations department. If I may be allowed to quote from Mr. L. L. L. Golden's fine talk made at the Award's Dinner, "public opinion is the king in the United States." He stressed that legislators must reflect, in their vote, the opinions of the majority or else they are thrown out of office. He also stressed that business, professions, trade union organizations and everyone who renders a public service in this country is subject to the will



DR. CAMP

of public opinion. Therefore, he said, public opinion is king. I think that we should all reflect deeply on this very salient remark.

Your President would like to thank profusely the very excellent job done by our staff. I do not know how we could have possibly carried on without their very, very helpful suggestions and the many services they rendered for us.

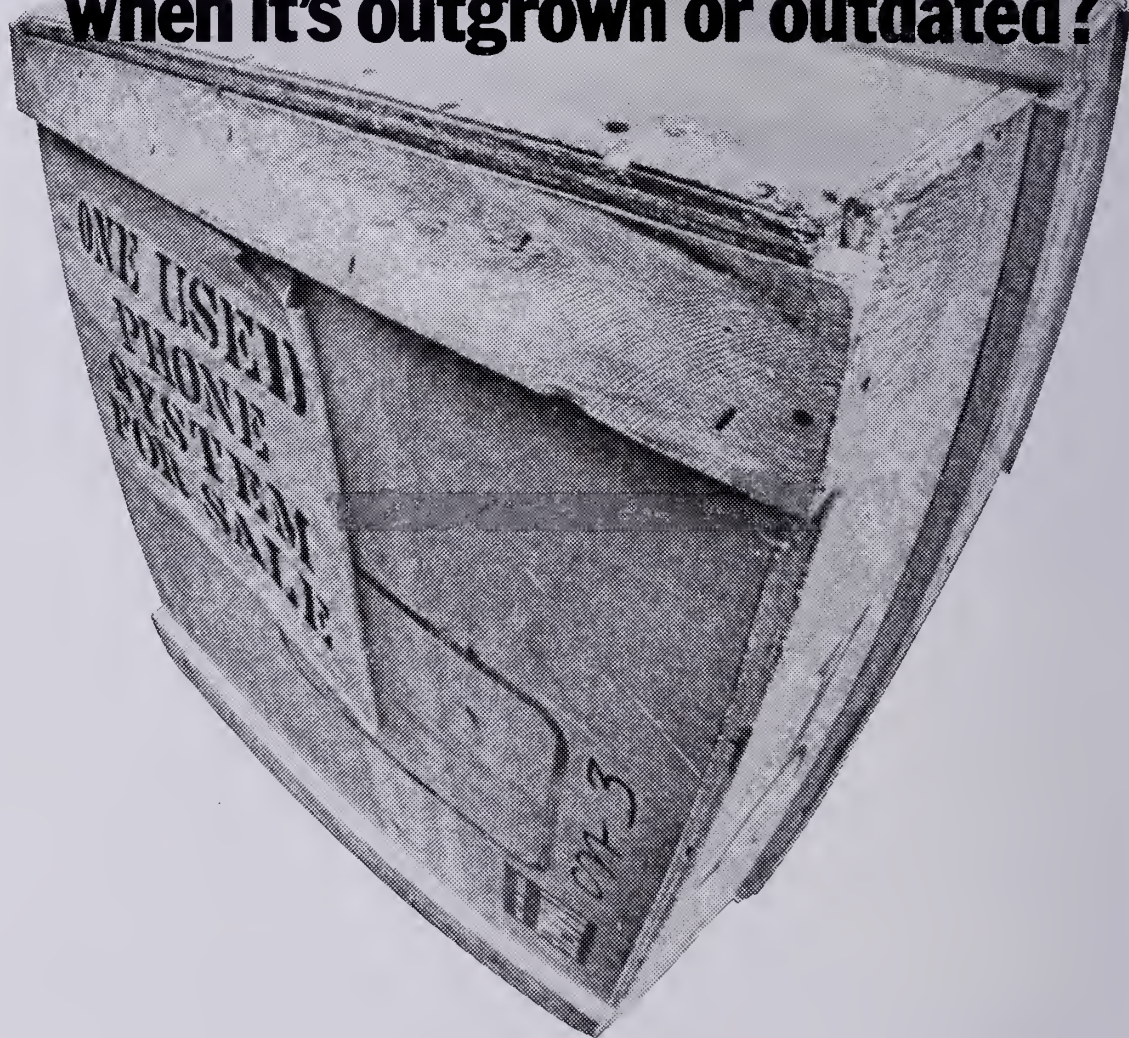
Since the dust has settled, let us all resolve to take a real interest in our Association. Let us all put our shoulder to the wheel and move forward to change those things which should be changed and to preserve the many things which are worth saving. I feel that

the private practice of medicine should be, and must be, preserved at all costs.

A stylized, handwritten signature in dark ink, appearing to read "E. E. Camp".

E. E. Camp, M. D.
President

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A Day In The Legislature

The Woman's Auxiliary to the MASA will have a day in the Legislature on May 16, 1973. The doctors' wives will be inviting their senators and representatives to have lunch with them at the Downtowner Motor Inn in Montgomery at 11:30 A. M. This will give our members a chance to become more informed and to get them to become involved in our legislative process. Auxiliary members are invited to sit in on the legislative session from 2 to 4 P. M.

There are many important bills coming up in our State Legislature that will reconvene for regular session on May 1, 1973. Redistricting for voting will be one of the first items of business. Note what it will do to your county or district. Urge your legislators to vote for their own plan, rather than the one designed by the federal courts over a year ago. The confusing federal plan follows lines used by the U. S. Census Bureau and frequently crosses county and beat lines. This would do nothing but cause mass confusion.

Chiropractic practitioners wish to be covered by Blue-Cross and Medicare. They are already covered by Medicaid against the recommendations of H. E. W. Contact your legislators to vote against chiropractic coverage.

If the Equal Rights Amendment "ERA" is ratified by 38 of the 50 state legislatures, it will become part of our Constitution. If passed, I believe women would have more to lose than to gain. Women would not be protected against having to lift heavy loads. Women could not retire at lower ages and receive social security benefits. Employers would not be required to furnish rest areas or separate toilet facilities for women. Wives

AUXILIARY PLEDGE

"I pledge my loyalty and devotion to the Woman's Auxiliary to the American Medical Association. I will support its activities, protect its reputation and ever sustain its high ideals."



MRS. GRADY

would be responsible for their husband's debts. A bride could not be legally required to assume her husband's name, nor would the children be required to bear their father's name. Seventeen year old ladies would be required to register for military service and to serve in combat units. Of course there would be no privacy under these conditions. Women and men are different. Women already have equal voting rights as well as equal job and pay opportunity. I firmly believe that we should be proud for the difference in the male and female sex and not try to eliminate it.

Betty Grady

Betty Grady,
President

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Water Torture

The biggest disaster in catastrophies such as widespread floods is not in the terribly tangible wreckage they cause but in the minds and bodies of those whose lives have been disrupted.

For thousands of such Alabamians, the Flood will never be gone and forgotten. It will impact on their daily lives until their deaths—and even hasten that in some of them.

Those who escaped the direct effects of the swirling waters may find it difficult to understand what has happened to the less fortunate ones. They say, "Sure their home was ruined but it isn't the end of the world."

For some of them, it is the end of their world. For all of them, at the very least it is a different world—a world in which the initial numbness of disaster gradually is replaced by gnawing, jagged emotions and aching, trouble-prone bodies.

The threat to life and health posed by floods usually is regarded in terms of the immediate and short-term dangers—drowning, diseases from contaminated water and food, the spread of infections by insects and rodents.

All too often, such threats are minor compared to the long-range effect on emotional and physical health. Numerous detailed studies carry a prediction of continuing problems for Alabama's victims.

Such studies, usually of disasters far less widespread than that which hit our state, show in the subsequent year an increase of about 50 per cent in the number of deaths among those whose homes have been flooded; more than a 50 per cent increase in conditions requiring surgery; a doubling of hospital admissions. In general, they show that men are less able to cope with the experience of disaster than women are.

The measures are of illnesses that are very real and serious—illnesses that seem to have no direct origin in the flood itself but show a relationship to its aftermath that is unmistakable.

Physicians in the hardest-hit areas of the state are aware of this potential in the months ahead and are preparing to cope with it. They need help—the type of help that direct material aid to the victims and the understanding of friends and neighbors can bring. In short, the victims need those things which will enable them to find a renewed and rewarding purpose in life.

TB Talk 1973

F. S. Wolf, M. D.

Montgomery, Alabama

For the past several years there has been presented to those attending the State Annual Tuberculosis Meeting a concise report on the successes and failures of Alabama's Isoniazid program. Today we add the provisional figures for the eighth year of this aggressive approach to Tuberculosis Control.

Within this group of almost 60,000 patients a picture is emerging. A picture which tells us a weakness exists in our efforts. During 1971, individuals receiving less than the desired 12 months of Isoniazid prophylaxis contributed ten new cases of the total of 918 new active cases reported to us. Each of you knows the record for your county. Did you achieve the desired standard for 12 months of prophylaxis? None of the cases reported to us had received more than ten months of prophylaxis. For this case the drug was taken intermittently only after maximum effort to "bring in the patient."

The good news? The figures for active disease occurring after 12 months of prophylaxis remain as you remember them from the 1972 report made to you. Only nine cases.

One of the important and extremely interesting findings reported to you previously and repeated today is the comparison of the extent of disease at time of diagnosis of the total number of newly reported cases occurring in the past eight years with the extent of disease when diagnosed in the current 1972 cases. This comparison repeats our finding of prior years. The cases from the prophylactic group have less advanced pulmonary disease and are not as ill at the time of diagnosis as are the patients refusing or not provided with prophylaxis. Very roughly we can say that Alabama's conservative use of prophylactic medication is indeed

aiding us in the control of TB. However, statistical review of our records adds little to the controversy about intermittent therapy of active disease or to a reduction in the number of months of prophylaxis. We do have data summarized hereto state that our conservative program is effective.

To find individuals at risk of active tuberculosis disease our efforts must be aggressive. This means a wider use of tuberculin testing into the adult population. The incidence of tuberculosis in the non-caucasian population requires extra effort to find the tuberculin positives in this group. In urging you to make this extra effort, all of us must realize that there will be no dramatic reduction in the number of newly reported active cases of tuberculosis. Indeed we must accept that fact that ours is a long and tedious route to success.

Year Prior To	Placed on Prophylaxis	Total
1964	49	
1965	868	
1966	3,343	
1967	4,206	
1968	6,533	
1969	7,313	
1970	14,121	
1971	12,611	
1972	10,357*	59,401*

NOW ON PROPHYLAXIS 8,230*

*PROVISIONAL

NEW ACTIVE CASES

STATE TOTAL	1965-1972	9,620
New Cases From Prophylactic Group		104
Less Than 12 Months of Prophylaxis		95
12 Months or More of Prophylaxis		9

ACTIVE DISEASE AFTER AT LEAST
ONE MONTH OF PROPHYLAXIS

Extent of Disease	Number	%
Primary	41	43
Minimal	15	16
Moderately Advanced	24	25
Far Advanced	15	16
	—	—
	95	100
Not Stated	9	

TOTAL STATE CASES
REPORTED IN 1972

%	Number
9	70
14	104
39	285
38	276
—	—
100	735

Not Stated 183

ONSET OF ACTIVE TB AFTER
12 MONTHS OF PROPHYLAXIS

	Total	Primary	Minimal	Mod. Adv.	Far Adv.
Less Than 1 Year					
After	7	4	1	2	0
Less Than 2 Years					
After	2	0	1	1	0
	—	—	—	—	—
Total	9	4	2	3	0

The average American male goes to the doctor about four times a year and the average woman about five times, according to the American Medical Association.

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Alleviating Drug Withdrawal

Animal studies conducted by Canadian scientists in Winnipeg indicate that treatment with the chemical choline chloride, may be of benefit in reducing the intensity of drug withdrawal symptoms in humans.

According to the National Society for Medical Research, the University of Manitoba research team used morphine addicted rats in their work. The rats were given morphine sulfate over a 35-day period. After that time, either choline chloride or a saline solution was administered with the animals' last dose of the drug and then without the morphine for three days.

The team—Dr. Carl Pinsky, Dr. J. W. Phillis, A. J. Vasquez and K. Jhamandas—found that the treatment reduced the intensity of withdrawal symptoms. Choline-treated rats suffered less weight loss and appeared healthier than their fellows who received the saline solution.

Earlier studies by the group indicated that opiates impair the release of acetylcholine at peripheral nerve and brain sites. Dr. Pinsky theorized that termination of morphine doses resulted in a flood of acetylcholine from central and peripheral cholinergic terminals into supersensitive nerve receptors.

The latest bit of research was based on this theory. The same results were duplicated in other animal species.

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(methacycline HCl)

CONTRAINDICATIONS:

Hypersensitivity to any of the tetracyclines. **WARNINGS:** Tetracycline usage during tooth development (last half of pregnancy to eight years) may cause permanent tooth discoloration (yellow-gray-brown), which is more common during long-term use but has occurred after repeated short-term courses. Enamel hypoplasia has also been reported. **Tetracyclines should not be used in this age group unless other drugs are not likely to be effective or are contraindicated. Usage in pregnancy.** (See above **WARNINGS** about use during tooth development.)

Animal studies indicate that tetracyclines cross the placenta and can be toxic to the developing fetus (often related to retardation of skeletal development). Embryotoxicity has also been noted in animals treated early in pregnancy.

Usage in newborns, infants, and children. (See above **WARNINGS** about use during tooth development.)

All tetracyclines form a stable calcium complex in any bone-forming tissue. A decrease in fibula growth rate observed in premature given oral tetracycline 25 mg/kg every 6 hours was reversible when drug was discontinued.

Tetracyclines are present in milk of lactating women taking tetracyclines.

To avoid excess systemic accumulation and liver toxicity in patients with impaired renal function, reduce usual total dosage and, if therapy is prolonged, consider serum level determinations of drug. The antianabolic action of tetracyclines may increase BUN. While not a problem in normal renal function, in patients with significantly impaired function, higher tetracycline serum levels may lead to azotemia, hyperphosphatemia, and acidosis.

Photosensitivity manifested by exaggerated sunburn reaction has occurred with tetracyclines. Patients apt to be exposed to direct sunlight or ultraviolet light should be so advised, and treatment should be discontinued at first evidence of skin erythema. **PRECAUTIONS:** If superinfection occurs due to overgrowth of nonsusceptible organisms, including fungi, discontinue antibiotic and start appropriate therapy.

In venereal diseases, when coexistent syphilis is suspected, perform darkfield examination before therapy, and serologically test for syphilis monthly for at least four months.

Tetracyclines have been shown to depress plasma prothrombin activity; patients on anticoagulant therapy may require downward adjustment of their anticoagulant dosage.

In long-term therapy, perform periodic organ system evaluations (including blood, renal, hepatic).

Treat all Group A beta-hemolytic streptococcal infections for at least 10 days.

Since bacteriostatic drugs may interfere with the bactericidal action of penicillin, avoid giving tetracycline with penicillin.

ADVERSE REACTIONS: Gastrointestinal (oral and parenteral forms): anorexia, nausea, vomiting, diarrhea, glossitis, dysphagia, enterocolitis inflammatory lesions (with monilial overgrowth) in the anogenital region.

Skin: maculopapular and erythematous rashes; exfoliative dermatitis (uncommon). Photosensitivity is discussed above (See **WARNINGS**).

Renal toxicity: rise in BUN, apparently dose related (See **WARNINGS**).

Hypersensitivity: urticaria, angioneurotic edema, anaphylaxis, anaphylactoid purpura, pericarditis, exacerbation of systemic lupus erythematosus.

Bulging fontanels, reported in young infants after full therapeutic dosage, have disappeared rapidly when drug was discontinued.

Blood: hemolytic anemia, thrombocytopenia, neutropenia, eosinophilia.

Over prolonged periods, tetracyclines have been reported to produce brown-black microscopic discoloration of thyroid glands; no abnormalities of thyroid function studies are known to occur.

USUAL DOSAGE: Adults—600 mg daily, divided into two or four equally spaced doses. More severe infections: an initial dose of 300 mg followed by 150 mg every six hours or 300 mg every 12 hours. Gonorrhea. In uncomplicated gonorrhea, when penicillin is contraindicated, 'Rondomycin' (methacycline HCl) may be used for treating both males and females in the following clinical dosage schedule: 900 mg initially, followed by 300 mg q.i.d. for a total of 5.4 grams.

For treatment of syphilis, when penicillin is contraindicated, a total of 18 to 24 grams of 'Rondomycin' (methacycline HCl) in equally divided doses over a period of 10-15 days should be given. Close follow-up, including laboratory tests, is recommended.

Eaton Agent pneumonia: 900 mg daily for six days.

Children—3 to 6 mg/lb/day divided into two to four equally spaced doses.

Therapy should be continued for at least 24-48 hours after symptoms and fever have subsided.

Concomitant therapy: Antacids containing aluminum, calcium or magnesium impair absorption and are contraindicated. Food and some dairy products also interfere. Give drug one hour before or two hours after meals. Pediatric oral dosage forms should not be given with milk formulas, and should be given at least one hour prior to feeding.

In patients with renal impairment (see **WARNINGS**) total dosage should be decreased by reducing recommended individual doses or by extending time intervals between doses.

In streptococcal infections, a therapeutic dose should be given for at least 10 days.

SUPPLIED: Rondomycin[®] (methacycline HCl) 150 mg and 300 mg capsules, syrup containing 75 mg/5 cc methacycline HCl.

Before prescribing, consult package circular or latest PDR information.



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***Indication**

Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indication as follows:

"Probably" effective: For the treatment of vulvovaginal candidiasis. Final classification of the less-than-effective indication requires further investigation.



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Contraindications: None known.

Precautions: Cases of sensitization and irritation have been reported. When noted the drug should be discontinued.

Dosage: One applicatorful intravaginally twice daily for 14 days. Course of therapy may be repeated if necessary.

Supplied: SPOROSTACIN Cream is available in 3.35 oz. (95g) tube with the ORTHO[®] Measured-Dose Applicator.

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Alabama Diversion Investigative Unit To Trace Sources Of Drugs On Illicit Market

The following information received from the Diversion Investigative Unit of the Alabama Department of Public Safety is also being submitted for publication in the Journal of the Alabama Pharmaceutical Association. This information is of utmost importance and should be read carefully—even between the lines. Open and frank discussions of the contents should be carried out with your peers and in your local organizations.

This law enforcement agency is dedicated to eradicating the mushrooming problem of legal drugs being diverted into illegal channels. Penalties for violators may and will be levied in courts of criminal law and not necessarily in licensing bureaus. To emphasize this last point, during the week of April 16 the Justice Department conducted a seminar in Montgomery, Alabama for prosecuting attorneys on methods of dealing with violators in the courts. We are indebted to the Diversion Investigative Unit for sharing their views and plans on this new approach, to an old but increasing problem, and should cooperate with their efforts fully.

With the assistance of the Federal Government and the Governor's Office, the State of Alabama has been able to initiate greatly increased efforts to combat the diversion of legal drugs into illegal channels. The Alabama Department of Public Safety has been given the primary responsibility for leading these efforts and in locating the various sources of diversion among the approximately 31,000 registrants that dispense, distribute, or use controlled substances in the regular course of their professional practice or business activities in Alabama. One must keep in mind that almost all controlled substances are handled and processed by registrants who are, in

fact, licensed by the State of Alabama through its pharmaceutical and medical licensing boards. To this end, a specialized force of various enforcement personnel has been created to determine the points of diversion which exists between the manufacturer and the ultimate user.

In order to accomplish this goal, the Federal Bureau of Narcotics and Dangerous Drugs, the Governor's Office of Drug Abuse, the Law Enforcement Planning Agency, the Department of Public Safety, the Department of Public Health and the Board of Pharmacy have pooled their resources and established what is called a Diversion Investigative Unit, (DIU). This nucleus of personnel is primarily concerned with determining the sources of diversion from all registrants in the State of Alabama. When the sources of diversion is located and identified, appropriate legal action can be taken against them in the form of revocation or suspension of their license to handle controlled substances and/or criminal prosecution.

The goal of the DIU is to trace the source of diversion of legitimate controlled substances found in the illicit market. The user is a link in the distribution chain and is important in terms of reaching the source of diversion. The DIU is interested primarily in dealing with the root cause of diversion and the person or persons responsible.

All law enforcement agencies, professional groups, teachers, parents and civic organizations are encouraged to participate in working with personnel from the DIU in locating these illegal sources. The benefits derived from a central point for evaluating and disseminating intelligence information and assistance pertaining to tracing diverted drugs to their source will be invaluable to everyone in the State of Alabama. This type of information is needed if the so

called professional pushers or their employees are to be identified and prosecuted to the full extent of the law, be it administrative or criminal in nature or both.

At the present time the DIU has offices in the following locations: Montgomery Diversion Investigative Unit, 200 S. Hull St., Montgomery, Alabama 36104, Phone (205) 269-7026; Mobile Diversion Investigative Unit, International Trade Center Building, Suite 326, Mobile, Alabama 36601, Phone (205) 438-2859 or 661-4993.

These offices are open from 8:00 A. M. to 5:00 P. M. five days a week. Arrangements can be made during these hours for special assistance needed at any time of the day or night. The DIU headquarters office in Montgomery can be contacted at any time through any city, county or state law

enforcement office.

Everyone is encouraged to notify the Alabama DIU of problems or cases pertaining to the diversion of legitimate drugs. The DIU staff, when appropriate, will work directly with local law enforcement agencies as well as any person or group who is concerned with the drug problem in this state. Unless a direct cooperative effort is brought to bear on the problem, drug availability for abuse will be kept at a high level. It is felt that the DIU concept will be instrumental in reducing the illegal sources of controlled drugs which are being misused and abused across the state. Alabama has taken another step in protecting the lives, health and well being of its citizens. Specifically, each and everyone of us can do something about the drug abuse problem. Law enforcement can not do it alone.

Low Blocking Indicted In Football Knee Injuries

Blocking high, rather than low, may be one way of reducing the high incidence of football knee injuries, reports the American Medical Association's Committee on the Medical Aspects of Sports.

The Committee is urging that football rules be changed to require all downfield blocking to be done above the waist. Medical sentiment for this move has been developing since results of a Michigan study revealed that 54 per cent of all serious knee injuries resulted from below-the-waist cross-body blocks. When only contact injuries were considered, the figure rose to 70 per cent.

Many coaches "feel that the aims of cross-body blocking can be accomplished by other means, and do not teach this method," said Dr. Thomas R. Peterson in a report of the Michigan study. "At the early high school level, however, the cross-body block is taught routinely and becomes an instinctive maneuver for most football players, especially in desperation efforts."

Dr. Peterson, an orthopedic surgeon and a clinical instructor in surgery at the Uni-

versity of Michigan Medical School, also pointed to the possibility of even more serious injury to the blocker, whose ribs, spine, lungs, kidneys and other internal organs are exposed to injury during a cross-body block.

A rules change by the NCAA, in effect for last fall's football season, took one step in this direction and is reported to have brought some reduction in the number of knee injuries over previous seasons. That change makes it illegal for an end or back to block below the waist after returning to the scrimmage area from downfield or from a flanking position, the so-called "crack-back" block.

But this does not affect blocking downfield, such as on kicks or pass plays, explained Tim Craig, PhD, secretary to the Committee on the Medical Aspects of Sports. "The biggest injury potential from such blocks below the waist comes downfield because of the great momentum generated there," Dr. Craig said. "In the tangle of the scrimmage, the players don't have enough room to get up to full steam."

Our Members Speak

Peer Review And You

by Robert H. Rhyne, Jr., M. D.

In February 1966, the new minimum wage law included hospital personnel for the first time. Up until that year hospital administrators had been able to provide their hospitals with extremely low priced labor, which had a very beneficial effect on the operating cost of hospitals. However, the new minimum wage law caused drastic jumps in the operating expense of hospitals each year for the following six or seven years. This major increase caught the insurance companies with low premiums and high pay outs. It caught the politicians with a lot of health care promises at a higher cost than they anticipated.

The insurance companies have hassled with hospital administrators and hospital boards about various charges and various means that the hospitals were using to meet this added burden of increased payrolls. The hospital administrators have not given in to insurance companies' pleading and have continued to do whatever was necessary to meet their own obligations.

Since the insurance companies and politicians have not been able to make any progress with getting the hospitals to lower their charges, they have started looking for other ways of making them reduce their costs. The only person who is in a position to exert a definite effect on the hospitals is the physician. Therefore, the physicians have been called upon to monitor each other's hospital practices.

Although, physicians fees have dropped since the initiation of Medicare and the hospital charges have skyrocketed secondary to the minimum wage law, the physician is expected to get the insurance company and the politician out of their financial bind. If the hospital happens to charge what the insurance company thinks is too much, they

yell "over utilization." Then they will call for the Peer Review Committee to ask one physician to condemn another for over utilization so that the insurance company can leave their premiums stationary and yet make a better profit. We would be the whipping boy!

It has been predicated that eventually elective admissions to hospitals will have to be reviewed first. Also, only a set number of days will be allocated for a particular diagnosis and then the patient will have to be discharged. All of this would be done by the physician monitoring his peer for the sole benefit of the insurance company and the politician. Hopefully, this would benefit the patient eventually with lower premiums. But it raises some questions though as to whether or not it would also give the patient a lower quality of care.

During these days of ever increasing malpractice insurance premiums, things are difficult enough with the physician trying to manage a patient's problems by himself. Who knows what kind of risk and frustrations would be involved if he has to get permission from this committee or that committee before a patient can be admitted or kept in the hospital. It is doubtful that spreading the responsibility for admissions and discharges is going to spread the liability.

Why should the physician be a policeman for the insurance company and the politician in regards to the hospital? Why can't we be left to worry about our own profession and judge physicians by how conscientious and knowledgeable they are? Why put each other on the defensive about using a certain procedure or even using the hospital?

If we are going to judge each other, why

can our present board of censors at the county level not handle this? Why do we have to have a new committee formed with a lot of government regulations?

A committee made up of doctors to work by H. E. W. rules would be an excellent opportunity for the government to tell us who to admit, how long to keep them, and how to treat them while they are in the hospital. They are already doing a pretty good job of telling us what to charge and how much we will get paid. I have yet to see the flag of H. E. W. fly over the "land of the free."

Now, that the minimum wage law has expired and there are no new wage increases anticipated in the next few months it is anticipated that hospital costs will level off and only show increases reflecting inflation. Perhaps, if we could stall for awhile until

these costs do stabilize and the insurance companies can adjust their rates and the politicians can adjust their promises, there will be no need for physicians to start making each other play the "you be a good boy" game according to the rules and guide lines of H. E. W. Unless, of course, the H. E. W. wants to use P. S. R. O. as a buggy whip.

Since we physicians are not called upon to help set hospital prices, insurance premiums, and political promises, why should we be the one to referee or police the coordination of these conflicts?

We need to give more thought to what is going on behind the scenes. We need to stand up for what is best for our patients and our profession and stop being pushed around by every group and interest. We need to start expressing our opinions and beliefs more openly and more fervently.

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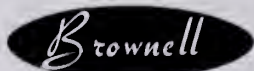
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Indications—Placidyl (ethchlorvynol) is indicated as short-term hypnotic therapy in the management of insomnia.

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Precautions—Toxic amblyopia has been reported with long-term continuous use of ethchlorvynol. Permanent visual defects have been observed, although amblyopia has improved after discontinuation of the drug. Drug dosage should be limited for elderly and debilitated patients to the smallest effective amount. If pain is present, this drug should only be given if insomnia persists after pain is controlled with analgesics. Caution is advised in prescribing the drug for patients who are being treated with either MAO inhibitors or antidepressants. Transient delirium has been reported with the combination of Placidyl and amitriptyline. Drug dosage should be reduced if prescribed for patients receiving MAO inhibitors or antidepressants. Caution should be exercised in patients with impaired hepatic or renal function. Patients who respond unpredictably to barbiturates or alcohol, or who exhibit excitement and release of inhibition in association with such agents, may also react in this way to Placidyl. Rarely, patients may exhibit symptoms suggestive of an unusual susceptibility to the drug; such as prolonged hypnosis, profound muscular weakness, excitement, hysteria, or syncope without marked hypotension. Transient jitteriness or ataxia may occur.

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Side effects: Blurred vision, dry mouth, dysuria, and other

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Obesity In America

Obesity affects one in every five Americans. It is harmful to health—and to the pocketbooks of those who fall for the never-ending flood of nonsense and outright quackery represented by “miracle” diets, pills and assorted gadgets. Is there an absolutely sure way to lose weight? Yes, and the American Medical Association reveals the simple, five-word formula in the following article. Is there such a thing as a “fattening” food? Why can concentration on calories be misleading?

Here's How (Not) To Kill Yourself

Are you among the one in five Americans who is overweight?

Or is your bathroom scale telling you that you soon will be? If so, then you have probably pondered your eating habits and may have tried dieting once or twice.

But how much have you thought about good nutrition while worrying about your weight? You can't diet successfully—and probably shouldn't try—unless you understand and follow basic rules for good nutrition and fitness, says the Council on Foods and Nutrition of the American Medical Association.

The Council, headed by Dr. Grace A. Goldsmith of Tulane University, New Orleans, advises:

Weight control is only one of many factors that affect your fitness and health. You should think about all those factors, particularly your need for proper exercise and good nutrition.

You *can* lose weight and keep it off safely by watching your diet, and you can avoid becoming overweight the same way. It's not hard but you have to be willing to try. In nearly all cases, once you get used to restricting and regulating your diet, you will find it is easy to stay trim, and certainly worth the effort.

Being overweight is not necessarily bad if body fat accounts for a relatively small proportion of total weight; it becomes a threat to your health when extra pounds are due to excess body fat.

Every person has a lot of fat in his body, no matter how lean he may look. Even if you are trim and well-exercised, as much as 16 to 20 per cent of your weight may be due to fat. If you are 50 years old, overweight and get no regular exercise to speak of, then as much as 30 to 50 per cent of your body weight—perhaps 50 to 100 pounds—is fat. That much excess fat, in addition to being unpleasant to look at, can put a serious strain on your heart and circulatory system.


How can you tell if you need to lose weight? And how many pounds should you lose? The best way to tell, outside of asking your doctor, is to look in the mirror.

Fat deposits around the trunk and on hips and thighs are easy to spot—so if you *look* fat, then you probably do need to reduce, particularly if you get very little exercise.

When, after dieting, you look trim and feel healthy, it's time to stop reducing and go back to a normal, moderate weight-maintenance diet.

Men and women, once they reach adulthood, need gradually less food as they grow older. The decline in food needs is not much in one year, but over 20 years it can make a world of difference. Yet many adults still eat the same amount of food daily at age 40 as they did at 20, and wonder why they have gained weight.

Parents also should realize that children can be put on diets, and should be if they appear overweight because of excess fat. Studies show that overweight children virtually always become overweight adults, and stay that way. It is much harder for them to lose weight than for people who gain extra weight after reaching maturity.



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Nonfatal Accidental Organophosphate Pesticide Intoxication In Seven Inmates Of A Correctional Institution

Howard Kessler, Ph.D.*

Pesticide Project Coordinator
Office of Pesticide Programs
Environmental Protection Agency
(Assigned to)

State Department of Public Health
Montgomery, Alabama

and

James F. Mracek, M. D.

Former Medical Director
Board of Corrections
Mt. Meigs Medical and Diagnostic Center
Mt. Meigs, Alabama

A number of cases of accidental human organophosphate pesticide intoxication have been reported in the medical literature (1-6). Most of these incidents (1) are associated with occupational exposure to organophosphate pesticides or (2) represent juvenile morbidity and mortality resulting from improper storage and use of pesticides in the home environment. The incident reported in this paper occurred at a medium security prison where the storage and use of pesticides are closely controlled by correctional personnel.

Chronology of Events

On the evening of March 9, 1972, nine inmates of the Draper Medium Security Prison at Speigner, Ala., drank a homemade alcoholic beverage containing the organophos-

phorus pesticide diazinon. This beverage, known as "julep," was made by one of the inmates from oatmeal, sugar, molasses, and raisins. These ingredients were allowed to ferment in a plastic bag, knotted near the top and placed in a waste can in the inmates' cell block. After the characteristic smell of this brew became noticeable, a cloth soaked in a liquid solution thought to be Texize®, was placed on top of the bag to mask the julep's odor; the solution actually used was a diazinon-concentrate. Some of the pesticide apparently dripped through the knot in the bag; however, the exact amount of contamination could not be determined.

The supply of diazinon, which was used regularly for roach and ant control was stored in a locked area in the institution. Small quantities of this pesticide frequently had been pilfered from the bulk container even though a guard supervised the crews.

At 8 p. m. the nine inmates each drank

*Present Affiliation: Pesticide Accident Investigator, Pesticide Branch, U. S. Environmental Protection Agency, Region IV, 1421 Peachtree Street, N. E., Atlanta, Ga. 30309

at least one-half pint of the brew. At 8:05 p. m., the first inmate began vomiting and reported to the infirmary. By 8:45 p. m., all nine inmates were in the infirmary with severe cramps, gastrointestinal distress, heavy salivation, lacrimation, sweating, dizziness, and chest pains. Maalox® was administered to coat their stomach linings, and the prison physician was called about 10 p. m.

The physician, the junior author, recognized the poisoning symptoms but was unable to obtain information from the patients to identify the toxicant. After determining which prisoner made the brew, the physician advised him to disclose the source of the toxicant to avoid further punishment for murder if one of the other inmates died. The brewer admitted having put some kind of detergent into the brew, but no detergents were found in the cell

block. After further interrogation, the prisoner stated that he used Texize® as a masking agent. Repeated search of the cell block area failed to disclose any of this material. An intensive search was then undertaken by all members of the guard force to locate the source of the toxicant by its odor. At 11:45 p. m., the source was discovered and the toxicant identified as diazinon. The nine poisoned prisoners were taken immediately to a local hospital for treatment with atropine and 2-PAM (a specific cholinesterase reactivator); the prisoners were admitted at 12:30 a. m., March 10. Through the cooperation of the Ayerst Laboratory representative in Montgomery, a shipment of 2-PAM (36 vials containing 1 g each) was rushed from Chamblee, Ga., by highway patrol. Blood samples were drawn for subsequent testing of cholinesterase by the Michel micro method.

Patient Information and Treatment

Patient No. 1:	23-year-old Negro male	
Past Medical History:	Shrapnel wounds in Vietnam resulted in loss of the right eye; previous history of hydrochloric acid ingestion.	
Admission Symptoms (3-10-72):	Severe gastrointestinal cramps, nausea, vomiting, excessive salivation, lacramation, and sweating.	
Significant Laboratory Results:	Cholinesterase — Cell .62 (low normal) Plasma — .67 (low normal) Glucose — 203 mg % (above normal) Transaminase (SGOT) — 80 units (above normal) Lactic dehydrogenase — 27 units (below normal)	
Treatment:	Atropine 1:05 a. m. 4.0 mg IV 1:45 a. m. 1.2 mg IV 1:55 a. m. 0.8 mg IV 2:50 a. m. 2.0 mg IV 3:30 a. m. 1.0 mg IV 5:30 a. m. 1.0 mg IV 9:00 a. m. 1.0 mg IV 11:00 a. m. 1.0 mg IV Total: 12.0 mg	2-PAM 2:30 a. m. 2,000 mg oral 6:30 a. m. 1,000 mg IV 12:00 noon 2,000 mg oral Total: 5,000 mg
Later Course:	3-17-72, complained of eye problem when coming from dark area to brightly lit area. Recovery uneventful otherwise.	

PESTICIDE INTOXICATION

Patient No. 2: 19-year-old Negro male

Past Medical History: Club-foot operation as child.

Admission Symptoms (3-10-72): Acute gastrointestinal distress.¹

Significant Laboratory Results: Cholinesterase — Call .63 (low normal)
Plasma — .60 (low normal)
Glucose — 199 mg % (above normal)

Treatment:

Atropine	
12:30 a. m. 4 mg IV	2:30 a. m. 2,000 mg oral
1:30 a. m. 2 mg IV	6:00 a. m. 2,000 mg oral
2:30 a. m. 2 mg IV	12:30 p. m. 2,000 mg oral
3:30 a. m. 1 mg IV	
5:30 a. m. 1 mg IV	Total: 6,000 mg
10:30 a. m. .8 mg oral	
2:00 p. m. .8 mg oral	
Total: 11.6 mg	

Later Course: Recovery uneventful.

Patient No. 3: 20-year-old Negro male

Past Medical History: Numerous old gunshot and knife wounds.

Admission Symptoms (3-10-72): Nausea and dizziness.¹

Significant Laboratory Results: Cholinesterase — Cell .86 (low normal)
Plasma — .79 (low normal)
Glucose — 197 mg % (above normal)
Total Protein — 8.4 gm % (above normal)
Alkaline phosphatase — 116 units (above normal)

Treatment:

Atropine	2-PAM
12:30 a. m. 4 mg IV	2:30 a. m. 2,000 mg oral
1:30 a. m. 2 mg IV	6:00 a. m. 2,000 mg oral
2:30 a. m. 2 mg IV	12:30 p. m. 2,000 mg oral
3:30 a. m. 1 mg IV	
5:30 a. m. 1 mg IV	Total: 6,000 mg
10:30 a. m. .8 mg oral	
2:00 p. m. .8 mg oral	
Total: 11.6 mg	

Later Course: Recovery uneventful.

PESTICIDE INTOXICATION

Patient No. 4: 44-year-old Negro male

Past Medical History: Former TB patient

Admission Symptoms (3-10-72): Severe gastrointestinal cramps, nausea, and vomiting.¹

Course: 6:30 a. m., urinary distress and much vomiting.

Significant Laboratory Results: Cholinesterase — Cell .61 (low normal)
Plasma — .66 (low normal)
Glucose — 124 mg % (above normal)
Alkaline phosphotase — 94 units (above normal)

Treatment:

Atropine	2-PAM
1:10 a. m. 4 mg IV	2:20 2,000 mg oral
2:30 a. m. 2 mg IV	6:30 2,000 mg IV
3:55 a. m. 1 mg IV	12:00 2,000 mg oral
5:30 a. m. 1 mg IV	
9:00 a. m. 1 mg IV	Total: 6,000 mg
11:00 a. m. 1 mg IV	
1:00 p. m. 1 mg IV	
Total: 11 mg	

Later Course: 3-17-72, still complained of muscle aches in legs.

Patient No. 5: 22-year-old Negro male

Past Medical History: Unremarkable.

Admission Symptoms (3-10-72): Severe gastrointestinal distress.¹

Significant Laboratory Results: Cholinesterase — Cell .67 (low normal)
Plasma — .71 (low normal)
Glucose — 247 mg % (above normal)
Alkaline phosphotase — 114 units (above normal)

Treatment:

Atropine	2-PAM
1:25 a. m. 4 mg IV	2:25 a. m. 2,000 mg oral
1:40 a. m. 2 mg IV	6:40 a. m. 2,000 mg IV
2:35 a. m. 2 mg IV	12:00 noon 2,000 mg oral
5:40 a. m. 1 mg IV	
10:00 a. m. .8 mg oral	Total: 6,000 mg
Total: 9.8 mg	

Later Course: Recovery uneventful.

PESTICIDE INTOXICATION

Patient No. 6: 17-year-old Negro male

Past Medical History: Unremarkable.

Admission Symptoms (3-10-72): Moderate gastrointestinal distress and severe leg cramps.¹

Significant Laboratory Results: Cholinesterase — Cell .44 (below normal)
Plasma — .48 (below normal)
Glucose — 290 mg % (above normal)

Treatment:	Atropine	2-PAM
	12:30 a. m. 4 mg IV	2:30 a. m. 2,000 mg oral
	1:30 a. m. 2 mg IV	6:00 a. m. 2,000 mg IV
	2:30 a. m. 2 mg IV	12:30 p. m. 2,000 mg oral
	3:30 a. m. 1 mg IV	
	5:30 a. m. 1 mg IV	Total: 6,000 mg
	10:30 p. m. .8 oral	
	2:00 p. m. .8 oral	
	Total: 11.6 mg	

Later Course: Recovery uneventful.

Patient No. 7: 21-year-old Negro male

Past Medical History: Unremarkable.

Admission Symptoms (3-10-72): Gastrointestinal distress and severe leg cramps.¹

Significant Laboratory Results: Cholinesterase — .75 (low normal)
Plasma — .75 (low normal)
Glucose — 158 mg % (above normal)

Treatment:	Atropine	2-PAM
	1:15 a. m. 4 mg IV	6:35 a. m. 2,000 mg IV
	1:55 a. m. 4 mg IV	12:00 noon 2,000 mg oral
	2:35 a. m. 2 mg IV	
	3:35 a. m. 1 mg IV	Total: 4,000 mg
	5:30 a. m. 1 mg IV	
	10:00 a. m. .8 mg oral	
	Total: 10.8 mg	

Later Course: Recovery uneventful.

PESTICIDE INTOXICATION

Patient No. 8: 18-year-old Negro male

Past Medical History: Unremarkable.

Admission Symptoms (3-10-72): Gastrointestinal distress.¹

Course: 4:30 a. m., awoke confused and was restrained and sedated.
5:55 a. m., awoke fighting and was sedated.
8:00 a. m., awoke in a rational mood and manner.

Significant Laboratory Results: Cholinesterase — Cell .53 (low normal)
Plasma — .64 (low normal)
Glucose — 183 mg % (above normal)
Alkaline phosphatase — 119 units (above normal)

Treatment:

Atropine	2-PAM
1:15 a. m. 4 mg IV	2:30 a. m. 2,000 mg oral
2:35 a. m. 2 mg IV	6:45 a. m. 2,000 mg IV
3:40 a. m. 1 mg IV	12:00 noon 2,000 mg oral
Total: 7 mg	Total: 6,000 mg

Sodium Pentothal
5:05 a. m. 2CC IV
6:15 a. m. 2CC IV
6:55 a. m. 2CC IV
Total: 6CC

Later Course: Recovery Uneventful.

Patient No. 9: 24-year-old Negro male

Past Medical History: Ulcers.

Admission Symptoms (3-10-72): Vomited blood on way to the hospital. Severe gastrointestinal distress.¹

Course: After initial atropine injection at 12:30 a. m., the patient's heartbeat increased to 125/130. EKG showed arial fibrillation which lasted 1 hour. At 2:00 a. m., oxygen was started and by 5:30 a. m. vital signs were good and stable. During the tachycardia this patient had a grade 2 Systolic Apical mummur. At 8:00 a. m. the patient exhibited heavy sweating and nausea without vomiting. Vital signs remained stable. By 10:00 a. m., the patient was resting comfortably.

Significant Laboratory Results: Cholinesterase — Call .81 (low normal)
Plasma — .77 (low normal)
Glucose — 248 mg % (above normal)
Transaminase (SGOT — 51 units) (above normal)

PESTICIDE INTOXICATION

Treatment:	Atropine	2-PAM
	12:30 a. m. 4 mg IV	2:00 a. m. 1,000- mg IV
	1:30 a. m. 2 mg IV	
	2:30 a. m. 2 mg IV	
	5:30 a. m. 1 mg IV	
	10:00 a. m. .8 mg oral	
	2:00 p. m. .8 mg oral	
	Total: 10.6 mg	
Later Course:	Fully recovered.	

¹All patients exhibited symptoms similar to those described for Case No. 1; only the most pronounced symptoms are mentioned for patients 2 through 9.

Discussion

The patients showed marked recovery by 6 a. m., March 10, and were discharged from the hospital at 5:10 p. m. that day to the Mt. Meig's Medical Treatment Center for prisoners. After observation at the Center for two days, they were returned to Draper Prison and kept in the infirmary for two more days.

Of particular interest is the fact that only one of the nine prisoners had an abnormally low cholinesterase level; levels in the other eight were low but still in the normal range of cholinesterase values. It was also interesting to note that all nine showed higher than normal levels of glucose. Fortunately, none of the victims were diabetic. All the patients recovered quickly and were returned to normal duties at the prison.

Although the prisoners disclaimed any knowledge that an insecticide had been used as the masking agent, they admitted this would not have deterred them from drinking the homemade brew since they were unaware of the toxicity of insecticides to humans.

Conclusion

The inherent dangers of pesticides should be made known to all persons who may come in contact with these compounds. The incident described in this paper exemplifies the importance of physicians being familiar with

this type of poisoning and thereby avoiding fatalities through prompt diagnosis and treatment.

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A temporary, artificial vitreous for the eye is being used at several medical research centers. Vitreous is the clear gel material inside the eye which gives it shape and helps hold its parts in place. Shrinking vitreous is a major cause of retina detachment, which affects the vision of many Americans every year. The retina lines the inner wall of the eye and transmits light to the brain via the optic nerve.

Bold New Programs Fill 'Country Doctor' Role

Playing hard as usual, 8-year-old Juan flailed his arms in a diving lunge at the thrown football. One hand came down hard against a rock hidden in the grass, and Juan yelled in pain. He had to leave the game and go home. Soon the hand began to swell, and Juan's parents worried. They put Juan in the car and took him into the nearby town for medical attention—a town that hasn't had a doctor in five years.

The town happens to be Estancia, New Mexico, where a new kind of rural health care is being practiced.

Juan's parents drove to a one-story building off the main street, where the hand was x-rayed and found to be broken. The lady in charge splinted the hand and directed Juan's parents to a hospital in another town, where a cast could be applied.

The lady was not a doctor, nor a nurse. She was a nurse-practitioner, a new type of medical worker . . .

Far to the east of Estancia, a minibus stopped on a road in the Maine woods. A woman got in, for a ride to the Rural Health Associates clinic, a "doctor's office" for not just one town, but a couple of dozen towns . . .

In Salem, Mo., a heart patient got an electrocardiogram. Within minutes, a specialist at the University of Missouri medical center, 130 miles away, was analyzing the EKG . . .

Those are three examples of areas where totally new methods of health care have replaced—or augmented—the traditional "country doctor."

Another new approach may prove to be the most widely applicable of all for doctor-short areas—satellite clinics scattered around a county and staffed by physicians from the county's primary city or town. This method is being inaugurated in Fresno County, Calif., home of Dr. Leopold J. Snyder, chairman of the Council on Rural Health of the

American Medical Association, who conceived the idea.

It is to these new approaches that rural America must look for health care, rather than waiting and hoping for a doctor to settle in their midst, Dr. Snyder says.

Why?

"Because it is obvious that many small communities that once had their own physician will never again have one," he said. "There are a number of reasons why: Economic conditions of the area, isolation from professional associates and cultural activities, plus the demands put on a single doctor when he has to serve a whole community and the surrounding area."

It is not that young physicians are not dedicated—they are, and that very fact deters them from settling in a country town, Dr. Snyder said.

"These young doctors have been brought up in an era of sophisticated medicine, sophisticated technology, communication and transportation . . . all of which can sometimes mean the difference between life and death for a patient, and they are aware of this. They want to be equipped to practice the best medicine they can."

How, then, can the wants of both rural residents and physicians be satisfied?

One answer is found in the Rural Health Associates in Farmington, Maine, a group practice headed by Dr. David C. Dixon, a 36-year-old surgeon. After he finished his residency a few years ago, he says, "I wouldn't go to a little town as the sole physician."

"The reason I and other doctors don't want to do that is a great fear of intellectual sterility, although some physicians may give other reasons—such as not wanting to be on call 24 hours a day. It's not the work—what

(Continued on Page 787)

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Pro-Banthine is considered adjunctive in total peptic ulcer therapy that may include diet, conventional antacids, bed rest, and other supportive measures.

Vigorous anticholinergic action — Pro-Banthine® Vials, 30 mg., are for intramuscular or intravenous use when prompt and vigorous anticholinergic action is required.

Mild anticholinergic action—Pro-Banthine® Half Strength, 7.5-mg. tablets, for more exact adjustment of maintenance dosage in mild to moderate gastrointestinal disorders.

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Contraindications: Glaucoma, obstructive disease of the gastrointestinal tract, obstructive uropathy, intestinal atony, toxic megacolon, hiatal hernia associated with reflux esophagitis, or unstable cardiovascular adjustment in acute hemorrhage.

Warnings: Patients with severe cardiac disease should be given this medication with caution.

Fever and possibly heat stroke may occur due to anhidrosis. In theory a curare-like action may occur, with loss of voluntary muscle control. For such patients prompt and continuing artificial respiration should be applied until the drug effect has been exhausted.

Diarrhea in an ileostomy patient may indicate obstruction, and this possibility should be considered before administering Pro-Banthine.

Precautions: Since varying degrees of urinary hesitancy may be evidenced by elderly males with prostatic hypertrophy, such patients should be advised to micturate at the time of taking the medication.

Overdosage should be avoided in patients severely ill with ulcerative colitis.

Adverse Reactions: Varying degrees of drying of salivary secretions may occur as well as mydriasis and blurred vision. In addition the following adverse reactions have been reported: nervousness, drowsiness, dizziness, insomnia, headache, loss of the sense of taste, nausea, vomiting, constipation, impotence and allergic dermatitis.

Dosage and Administration: The recommended daily dosage for adult oral therapy is one 15-mg. tablet with meals and two at bedtime. Subsequent adjustment to the patient's requirements and tolerance must be made.

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Contraindications: Porphyria, sensitivity to barbiturates, or susceptibility to dependence on sedative-hypnotics. **Warning:** May be habit forming. **Precautions:** Exercise caution in: moderate to severe hepatic disease; withdrawal in drug dependence or the taking of excessive doses over a long period, to avoid withdrawal symptoms; elderly or debilitated patients, to avoid possible marked excitement or depression; use with alcohol or other CNS depressants, because of combined effects. **Adverse Reactions:** Drowsiness at daytime sedative dose levels, skin rashes, "hangover" and gastrointestinal disturbances are seldom seen. **Usual Adult Dosage:** For daytime sedation, 15 mg. to 30 mg. t.i.d. or q.i.d. For hypnosis, 50 mg. to 100 mg. **Available as:** Tablets, 15 mg., 30 mg., 50 mg., 100 mg.; Elixir, 30 mg. per 5 cc. (alcohol 7%); BUTICAPS* [Capsules BUTISOL SODIUM (sodium butabarbital)] 15 mg., 30 mg., 50 mg., 100 mg.

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(Continued from Page 782)

they are really saying is that they wouldn't be able to maintain their skills to take care of patients in the way they want to take care of them.

"But if a man is involved in a health delivery system like ours, it's a different story. Our system is on call 24 hours a day, but an individual physician is only on call every fifth night. You get days off. And you can figure on taking two weeks off for continuing medical education."

The opportunity for consultation with other physicians—whether in a group practice or with other solo practitioners—also is important, Dr. Dixon said.

"Medicine is so sophisticated now that you can take the brightest doctor in the world, and if he doesn't have constant interplay with other physicians, and a chance to get back to academic medicine now and then, the quality of his care is inevitably going to decline."

Dr. Snyder and Dr. Dixon emphasize the importance of each community or rural area designing its own health care plan. It should be done with all interested parties—doctors, business and civic leaders and consumers—discussing various wants and needs, they say.

"A program applicable in one place may not be applicable in another," Dr. Dixon said. "And there has to be somebody to take the lead."

The logical leader, added Dr. Snyder, is the local medical society, as in Fresno, where Dr. Snyder was the catalyst for action.

After "playing with the idea for 15 years and trying to sell it for 10 years," he got a \$10,000 grant from the California Medical Association to get started.

"We went out to two adjoining communities in northwest Fresno County, Firebaugh and Mendota, about 40 miles from Fresno," he said.

The health care situation there, according to a local newspaper, ranked with "the worst anywhere."

Fresno County—bigger than Rhode Island and Delaware combined—is farming country ("half the cantaloupe America eats comes from the Mendota area," Dr. Snyder said). The permanent Firebaugh-Mendota population of 15,000 is doubled by seasonal influxes of migrant workers.

Only three badly overworked doctors have been available, and the county health department has held two evening clinics a week in Firebaugh, one a general clinic and the other devoted to obstetrics, gynecology and family planning. Each session draws 80 to 90 people. Others make the long round trip to Fresno for treatment, "but since many of them don't have transportation, this means that many of them don't get health care, except in emergencies," Dr. Snyder said.

The problem was obvious. But the solution was decided only after extensive discussion with residents, to get them involved in the planning and make sure that whatever program materialized would be acceptable to them.

"All health programs should be worked out as we worked this one out, at the county level, with county people," Dr. Snyder said. People like Fidel De La Cruz, mayor of Mendota, and John Witworth, who has lived in the area almost 30 years. The views of everyone—from physicians to potential patients—were sought.

The rich, the poor, the middle class; whites, blacks and Mexican-Americans. All were asked what was needed. And their reply was: Availability of more physician and dental services; emergency service at nights and on weekends; transportation to local health facilities as well as to facilities in Fresno; health education, especially in hygiene and nutrition; social and rehabilitation services, and payment for services on

(Continued on Page 790)

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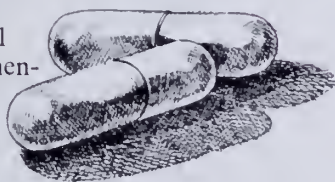


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A patient may blame his attacks of gastritis or duodenitis on "something he ate" but contributing factors may be his job, marital problems, financial worries or some other unmentioned source of stress and excessive anxiety that exacerbated the condition.

Whether it is "something he ate" or "something eating him," adjunctive Librax can help. Librax offers both the antianxiety action of Librium® (chlordiazepoxide HCl), that can help relieve excessive anxiety, and the dependable anticholinergic action of Quarzan® (clidinium Br), that can help reduce gastrointestinal hypermotility and hypersecretion.



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Each capsule contains 5 mg chlordiazepoxide HCl and 2.5 mg clidinium Br.

Before prescribing, please consult complete product information, a summary of which follows:

Contraindications: Patients with glaucoma; prostatic hypertrophy and benign bladder neck obstruction; known hypersensitivity to chlordiazepoxide hydrochloride and/or clidinium bromide.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering Librium (chlordiazepoxide hydrochloride) to known addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards. As with all anticholinergic drugs, an inhibiting effect on lactation may occur.

Precautions: In elderly and debilitated, limit dosage to smallest effective amount to preclude development of ataxia, oversedation or confusion (not more than two capsules per day initially; decrease gradually as needed and tolerated). Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients. Employ usual precautions

in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: No side effects or manifestations not seen with either compound alone have been reported with Librax. When chlordiazepoxide hydrochloride is used alone, drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally with chlordiazepoxide hydrochloride, making periodic blood counts and liver function tests advisable during protracted therapy. Adverse effects reported with Librax are typical of anticholinergic agents, i.e., dryness of mouth, blurring of vision, urinary hesitancy and constipation. Constipation has occurred most often when Librax therapy is combined with other spasmolytics and/or low residue diets.



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a sliding fee scale, based on income.

With the help of more grant money from the federal Regional Medical Program, the California Medical Association, and the communities, a comprehensive health care center will open this month (November).

It occupies a former doctor's office which was renovated by community labor, and much of the equipment has been donated by doctors and dentists. Two mobile structures, one a dental office and the other administrative headquarters, flank the center.

The medical unit will provide a full range of care, plus immunizations, health education and family planning information.

"We have close to 100 doctors from the county medical society who have said they will either help regularly staff the clinic (on a volunteer rotating basis) at the start, or come out for specialty clinics," Dr. Snyder said. However, he added, "we will try to develop a permanent staff of doctors for the center, and rely on society volunteers only for back-up purposes.

"We are arranging with the community hospital in Fresno to provide x-ray and laboratory services and we also are arranging what is probably as important as anything else—transportation."

Transportation is a special need of the rural poor, he said. "Usually a family has to wait until the father gets home from the fields with the family car, late at night. Then they will come in with a child who has been sick all day. This happens over and over again."

Now, minibuses will be used to carry patients to and from the health center and other facilities.

Dr. Snyder, a specialist in internal medicine who expects to spend one evening a week at the center, said it will not be just for poor people, but for everyone.

"The community has agreed that every-

one should receive care through one door," he said. (The same philosophy applies at the Maine clinic).

"There won't be two doors, two classes of service—only one class, the best quality. Those who can pay will pay, others won't. This is the kind of thing we would like to see all over."

Although "every area has to deal with its own problems," Dr. Snyder feels that a program such as Fresno County's should be widely applicable, with leadership or strong participation by the local medical society and other health care professionals. (One of the leading backers of the project was Dr. Tal Carter, a dentist, of neighboring Madera, who offered equipment and staffing services for the dental unit).

"You can put all the funds you want to in an area, and if the health care providers don't assume responsibility for the project, nothing is going to happen," Dr. Snyder said.

"The important thing to me is that our medical society has accepted the fact that it is responsible for the medical care of the whole county. And from that attitude we developed this program—to give everyone access to care."

Practicing physicians, he added, also have an obligation to young doctors in helping to solve the dilemma mentioned earlier—of young doctors wanting to serve rural patients but not wanting to be stuck in some isolated community. Innovative projects such as Firebaugh-Mendota and Rural Health Associates in Maine provide the answer, Dr. Snyder said.

"If we are able to develop systems which will enable young people to fulfill the social commitment they feel, and yet remain with their peers and maintain their skills, then they will be able to settle in very comfortably and carry on after us," Dr. Snyder said. "The young person hardly has the knowhow or the backing to develop such a system, so

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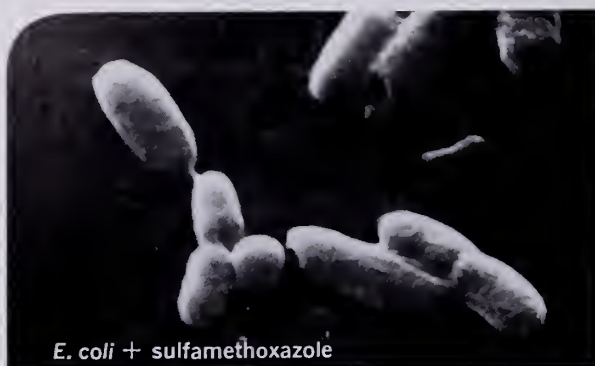
Encounter under the Scanning Electron Microscope



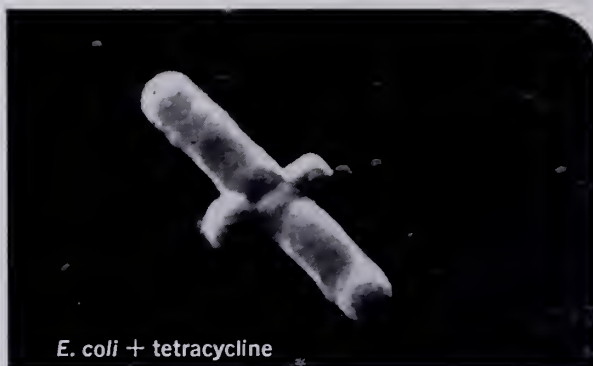
SEM reveals changes in *E. coli* exposed to antibacterial agents

The Scanning Electron Microscope (SEM) is the only instrument which gives 3-dimensional views on a microscopic level. This permits the surface morphology of microorganisms to be observed in

detailed perspective. Changes in surface morphology of *E. coli* exposed to various antimicrobial agents are seen on the following page. An SEM photomicrograph of normal control *E. coli* appears above.



E. coli + sulfamethoxazole



E. coli + tetracycline



E. coli + cephalothin



E. coli + ampicillin

Different modes of antibacterial action — Similar changes in morphology

As part of a series of experiments,¹⁻³ strains of *E. coli* proven susceptible to each antibacterial agent were exposed to 1 MIC of the respective antibacterials for a three-hour period. Included were cell-wall-active drugs, ampicillin and cephalothin; a drug interfering with intracellular protein synthesis, tetracycline; and a chemical agent which acts by interference with para-aminobenzoic acid, sulfamethoxazole.

As seen above, elongation of the bacilli, mid-cell defects and spheroplast-like forms may be appreciated with the SEM technique. These changes in bacterial morphology were similar... regardless of the antibacterial agent used and irrespective of

its mechanism of action.

"At present, the significance of these observations in clinical infection must be considered with caution, but it is hoped that these data will stimulate a reevaluation of present concepts of the nature and role of morphological variants of bacteria exposed to a variety of antibacterial factors."²

It should be noted that no clinical conclusions can be drawn from this study, as it is not always possible to extrapolate *in vitro* data to humans.

References: 1. Klainer, A. S.; Fass, R. J., and Perkins, R. L.: Scientific Exhibit presented at the 25th American Medical Association Clinical Convention, New Orleans, La., Nov. 28-Dec. 1, 1971. 2. Klainer, A. S., and Perkins, R. L.: *Antimicrob. Agents Chemother.*, 1:164, 1972. 3. Klainer, A. S.: Data on file, Hoffmann-La Roche Inc., Nutley, N.J.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Acute, recurrent or chronic nonobstructed urinary tract infections (primarily pyelonephritis, pyelitis and cystitis) due to susceptible organisms. **Note: Carefully coordinate *in vitro* sulfonamide sensitivity tests with bacteriologic and clinical response; add aminobenzoic acid to follow-up culture media. The increasing frequency of resistant organisms limits the usefulness of antibacterials including sulfonamides, especially in chronic or recurrent urinary tract infections.** Measure sulfonamide blood levels as variations may occur; 20 mg/100 ml should be maximum total level.

Contraindications: Sulfonamide hypersensitivity; pregnancy at term and during nursing period; infants less than two months of age.

Warnings: Safety during pregnancy has not been estab-

lished. Sulfonamides should not be used for group A hemolytic streptococcal infections and will not eradicate prevent sequelae (rheumatic fever, glomerulonephritis) of infections. Deaths from hypersensitivity reactions, agranulosis, aplastic anemia and other blood dyscrasias have been reported and early clinical signs (sore throat, fever, pallor, purpura or jaundice) may indicate serious blood disorders. Frequent and urinalysis with microscopic examination are recommended during sulfonamide therapy. Insufficient data on children under six with chronic renal disease.

Precautions: Use cautiously in patients with impaired or hepatic function, severe allergy, bronchial asthma; in glucose-6-phosphate dehydrogenase-deficient individuals in whom related hemolysis may occur. Maintain adequate fluid intake to prevent crystalluria and stone formation.

Adverse Reactions: Blood dyscrasias (agranulocytosis, leukopenia, thrombocytopenia, aplastic anemia).

Encounter in Clinical Practice

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Antibacterial Gantanol® (sulfamethoxazole) controls susceptible strains of *E. coli* and other gram-negative and gram-positive organisms

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In from 2 to 3 hours after the initial 2-Gm adult dose, antibacterial levels are present in

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Subsequent 1-Gm doses provide up to 12 hours of antibacterial coverage. More severe u.t.i. may require a q. 8 h. dosage regimen. Either schedule provides coverage during the waking

and sleeping hours—especially important during hours of sleep when normal urinary retention tends to favor bacterial proliferation.

Also effective in nonobstructed chronic and recurrent u.t.i.

It is not uncommon for the elderly and the debilitated to develop chronic and/or recurrent nonobstructed urinary tract infections such as pyelonephritis and cystitis. Such cases often re-

spond satisfactorily to Gantanol. The increasing frequency of resistant organisms is a limitation of usefulness of antibacterial agents including sulfonamides, especially in chronic or recurrent u.t.i.

Your Option: Tablets or Suspension

Either dosage form—the Tablets or the pleasant-tasting, cherry-flavored Suspension—can provide the dependable antibacterial activity necessary to control susceptible nonobstructed cystitis and pyelonephritis. Symptomatic improvement may usually be expected in 24 to 48 hours. The usual precautions with sulfonamide

therapy should be observed, including adequate fluid intake. Gantanol (sulfamethoxazole) is generally well tolerated with relative freedom from complications; the most common side effects are nausea, vomiting and diarrhea. Frequent c.b.c.'s and urinalyses with microscopic examination are recommended.

In nonobstructed cystitis and pyelonephritis due to susceptible organisms

**Gantanol®
(sulfamethoxazole)
Basic Therapy**

stic anemia, thrombocytopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia); *allergic reactions* (erythema multiforme, skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctivitis and scleral injection, photosensitization, arthralgia and allergic myocarditis); *gastrointestinal reactions* (nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and colitis); *CNS reactions* (headache, peripheral neuritis, meningoencephalitis, depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia); *miscellaneous reactions* (drug fever, chills, interstitial nephrosis with oliguria and anuria, periarteritis nodosa and Raynaud's phenomenon). Due to certain chemical similarities with the goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia as well as thy-

roid malignancies in rats following long-term administration. Cross-sensitivity with these agents may exist.

Dosage: Systemic sulfonamides are contraindicated in infants under 2 months of age (except adjunctively with pyrimethamine in congenital toxoplasmosis).

Usual adult dosage: 2 Gm (4 tabs or teasp.) initially, then 1 Gm b.i.d. or t.i.d. depending on severity of infection.

Usual child's dosage: 0.5 Gm (1 tab or teasp.)/20 lbs of body weight initially, then 0.25 Gm/20 lbs b.i.d. Maximum dose should not exceed 75 mg/kg/24 hrs.

Supplied: Tablets, 0.5 Gm sulfamethoxazole; Suspension, 0.5 Gm sulfamethoxazole/teaspoonful.



Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, N.J. 07110

Pinworm therapy is often a family affair



Contraindications: History of hypersensitivity to thiabendazole.

Warnings: If hypersensitivity reactions occur, drug should be discontinued immediately and not resumed. Rarely, erythema multiforme has been associated with thiabendazole therapy; in severe cases (Stevens-Johnson syndrome), fatalities have occurred. Because CNS side effects may occur quite frequently, activities requiring mental alertness should be avoided. Safe use in pregnancy or lactation has not been established.

Precautions: Ideally, supportive therapy is indicated for anemic, dehydrated, or malnourished patients prior to initiation of anthelmintic therapy. In presence of hepatic or renal dysfunction,

patients should be carefully monitored.

Adverse Reactions: Most frequently encountered are anorexia, nausea, vomiting, and dizziness. Less frequently, diarrhea, epigastric distress, pruritus, weariness, drowsiness, giddiness and headache have occurred. Rarely, tinnitus, hyperirritability, numbness, abnormal sensation in eyes, blurring of vision, xanthopsia; hypotension, collapse; enuresis; transient rise in cephalin flocculation and SGOT; perianal rash, cholestasis and parenchymal liver damage; hyperglycemia; transient leukopenia; malodor of the urine, crystalluria, hematuria; appearance of Ascaris in the mouth and nose. Hypersensitivity reactions

Chewable Tablets^{500 mg} Mintezol[®] (THIABENDAZOLE | MSD)



so easy to take
everyone in the family
can keep to the
regimen you prescribe

include: fever, facial flush, chills, conjunctival injection, angioedema, anaphylaxis, skin rashes, erythema multiforme (including Stevens-Johnson syndrome), and lymphadenopathy.
Supplied: Chewable tablets, containing 500 mg thiabendazole, in boxes of 36, strip packaged, individually foil wrapped; Suspension, containing 500 mg thiabendazole per 5 ml, in bottles of 120 ml.

For more detailed information, consult your MSD representative or see full prescribing information. Merck Sharp & Dohme, Division of Merck & Co., Inc., West Point, Pa. 19486

INDICATION | DOSAGE SCHEDULE

MINTEZOL[®] (Thiabendazole, MSD) has demonstrated effectiveness against a broad spectrum of nematode infections. Dosages are weight related. For your convenience, the information in the weight-dose chart below is included in the full prescribing information and in the 1973 edition of PDR.

The recommended maximum daily dose of MINTEZOL is 3 g (6 tablets).

MINTEZOL should be given after meals if possible. Dietary restriction, complementary medications, and cleansing enemas are not needed.

The usual dosage schedule for all conditions is two doses per day. The size of the dose is determined by the patient's weight.

Weight-dose chart:

WEIGHT (lb)	EACH DOSE (g)	TABLETS
25	0.25	½
50	0.5	1
75	0.75	1½
100	1.0	2
125	1.25	2½
150 & over	1.5	3

The regimen for each indication follows:

INDICATION	REGIMEN	COMMENTS
Pinworm disease	Two doses per day for 1 day. Repeat in 7 days. This regimen is designed to reduce the risk of reinfection.	If this is not practical, give 2 doses per day for 2 successive days.
Threadworm,* large roundworm,* hookworm,* and whipworm* disease	Two doses per day for 2 successive days.	A single dose of 20 mg/lb or 50 mg/kg may be employed as an alternative schedule, but a higher incidence of side effects should be expected.
Creeping eruption	Two doses per day for 2 successive days.	If active lesions are still present 2 days after completion of therapy, a second course is recommended.
Symptoms of trichinosis* during the invasive phase of the disease	Two doses per day for 2 to 4 successive days according to the response of the patient.	The optimal dosage for the treatment of trichinosis has not been established.

*Clinical experience with thiabendazole for treatment of each of these conditions in children weighing less than 30 lb has been limited.



If he's making the
rounds of San Francisco...

Antivert[®] (meclizine HCl) for vertigo*

Antivert[®] (meclizine HCl) has been found useful in the management of vertigo associated with diseases affecting the vestibular system. It is available as Antivert (12.5 mg. meclizine HCl) and Antivert/25 (25 mg. meclizine HCl) scored tablets for convenience and flexibility of dosage. Antivert/25 (25 mg. meclizine HCl) Chewable Tablets are available for the management of nausea, vomiting, and dizziness associated with motion sickness.

INDICATIONS. Based on a review of this drug by the National Academy of Sciences-National Research Council and/or other information, FDA has classified the indications as follows:

Effective: Management of nausea and vomiting and dizziness associated with motion sickness.

Possibly Effective: Management of vertigo associated with diseases affecting the vestibular system.

Final classification of the less than effective indications requires further investigation.

CONTRAINDICATIONS. Administration of Antivert during pregnancy or to women who may become pregnant is contraindicated in view of the teratogenic effect of the drug in rats.

The administration of meclizine to pregnant rats during the 12th-15th day of gestation has produced cleft palate in the offspring. Limited studies using doses of over 100 mg./kg./day in rabbits and 10 mg./kg./day in pigs and monkeys did not show cleft palate. Congeners of meclizine have caused cleft palate in species other than the rat.

Meclizine HCl is contraindicated in individuals who have shown a previous hypersensitivity to it.

WARNINGS. Since drowsiness may, on occasion, occur with use of this drug, patients should be warned of this possibility and cautioned against driving a car or operating dangerous machinery.

Usage in Children: Clinical studies establishing safety and effectiveness in children have not been done; therefore, usage is not recommended in the pediatric age group.

Usage in Pregnancy: See "Contraindications."

ADVERSE REACTIONS. Drowsiness, dry mouth and, on rare occasions, blurred vision have been reported.

ROERIG 

A division of Pfizer Pharmaceuticals
New York, New York 10017

(Continued from Page 790)

that is our responsibility, the responsibility of organized medicine."

Some of those systems will utilize physicians fulltime or only part time, and others will utilize physicians' assistants or nurses only, with physicians acting as advisors, he added.

Here is a brief look at some other programs:

—RURAL HEALTH ASSOCIATES, FARMINGTON, MAINE. Organized a year ago by Dr. Dixon and four other physicians to provide care in a doctor-short area of 1,900-square miles and 29 towns around Farmington, Maine. Physicians, business and labor leaders and consumers reviewed needs before deciding on a non-profit corporation, which was started with financial aid from the Office of Economic Opportunity.

RHA runs a central clinic in Farmington, and satellite clinics have opened or will open soon in Rangely, Jay and Kingfield. All clinics have a physician, and all will soon be linked by a television communication system, providing instant consultation. Here, as in Fresno County, the "one door" concept applies for rich and poor among the 30,000 residents served. The doctors and two dentists are unaware of who is paying and who isn't.

The medical staff also has grown, instead of losing doctors as is usually the case in rural areas. "The thing that is gratifying to me," Dr. Dixon said, "is that we have attracted three really fine physicians in just one year."

—NURSE-PRACTITIONER, ESTANCIA, NEW MEXICO. One recent morning was fairly typical for Mrs. Martha Schwebach, the nurse-practitioner at Hope Medical Center. Besides the little boy with the broken hand, she saw eight other patients, including a woman with tuberculosis and a young man with flu.

"In summer I do a lot of suturing, of cuts

and bruises," said the attractive mother of four, "but that slows down when the children go back to school."

The center was formerly occupied by a doctor. After he moved away, the town of 800 could not attract a replacement. So, with a grant from the federal Regional Medical Program, the University of New Mexico medical school trained Mrs. Schwebach, the nation's first nurse-practitioner. She was a registered nurse living in Estancia with her rancher-husband. Mrs. Schwebach got seven months of special training at the medical school, enabling her to provide "first line" care such as suturing, physical examinations, x-rays and splinting.

She does not diagnose illness but "sorts out the normal from the abnormal," and is linked by special telephone to physicians at the medical school. Doctors are always available to her. Two physicians, one a pediatrician, and a dentist also visit the center weekly. Each Wednesday morning, Mrs. Schwebach is at the medical school, conferring with doctors and collecting reading matter, all part of her continuing education.

As a new type of health professional, Mrs. Schwebach has met with enthusiastic acceptance, although patients still are a little unsure of what to call her. "Some call me nurse, some call me doctor—and some just call me Martha!" she laughed.

—AUTOMATED DEVICES. In the Ozark town of Salem, Mo., Dr. Billy Jack Bass has a unique "medical assistant"—a computer-telephone linkup with the University of Missouri medical school 130 miles away. The arrangement helps him in several ways: by connecting him with medical specialists, for consultation (he used to have to refer difficult cases to St. Louis specialists and "the trip and expenses are hard for people living on hard-scrabble farms"); by storing medical records, and by increasing the efficiency of his office.

The equipment enables a patient to get a full battery of tests in less than 3 hours,

and all data is stored on the computer for quick retrieval. Formerly, patients had to travel up to 90 miles for comparable services, and it took two or three days to run the tests and get results.

Another machine in Dr. Bass' office "interviews" patients—through audio tape, cartoons and printed questions—for their medical histories. All the devices, in use for a year and a half, have proven "100% acceptable to patients," Dr. Bass said.

The equipment was developed by the Missouri Regional Medical Program and the University of Missouri's schools of medicine and engineering. The RMP plans to extend

the experiment by setting up a no-physician satellite clinic 30 miles from Salem, linked by computer to the existing clinic.

"These few models represent a great range of situations, needs and action to meet those needs," Dr. Snyder said. "And this is because there is no one simplistic solution applicable to all areas. Each area will need to develop its own plan."

He urged interested residents of doctor-short areas to write to the American Medical Association's Department of Rural Health for informational guidelines on setting up health care systems. (AMA, 535 N. Dearborn, Chicago, Ill. 60610).

A Uniform Ambulance Reporting Form

Caldwell B. Esselstyn, M. D.

Roy Nickels

Until relatively recently emergency health services have been left largely to itself. Over the years service has depended on those whose primary responsibility and expertise was in other areas (the care of the dead) or the government at the federal, state or local level, or proprietary interests or the volunteer with his good will and concern for fellow man.

This article deals with a small but important segment of the national effort to upgrade emergency services and equipment—namely a standard reporting ambulance form.

* * *

For the past four years the New York State Department of Health, with the support of a Department of Transportation grant, has been field testing and analyzing data obtained from a standard form. The

form is still being refined after five editions and is the result of the constructive input of ambulance personnel, law enforcement agencies, medical organizations and the State Hospital Association, as well as the Bureau of Emergency Health Services of the New York State Department of Health.

The form was introduced to ambulance services throughout the State by personal interviews and countless meetings between ambulance personnel and regional representatives of the Bureau of Emergency Health Services. Repeat visits were frequently made and additional help provided to assist attendants in the filling out of what at first, to some, seemed to be a formidable task. In many instances, it required not one but several visits to persuade certain ambulance squads of the value of taking on added responsibilities.

Gradually the number of cooperating squads has increased until today 250 organizations within the State participate in the program. Without their cooperation, significant data could not have been collected. With

(Continued on Page 801)

EDITOR'S NOTE: C. B. Esselstyn, M. D. is former Director of the Bureau of Emergency Health Services in New York State Department of Health. Mr. Roy Nickels is Coordinator, Community Programs Section—Bureau of Emergency Health Services, New York State Department of Health.

Now form follows function

Only **Candeptin** (candicidin)
gives you this unique form...
a soft gelatin capsule—
highly effective therapy for all
your vaginal moniliasis patients

CANDEPTIN® (candicidin) VAGELETTES™
Vaginal Capsules...a unique dosage form...
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CANDEPTIN VAGELETTES Vaginal Capsules provide
the specific high potency antimicrobial agent,
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designed with your patient in mind. It permits easy
manual insertion without the need for an applicator
or inserter...of particular value for the pregnant
patient...for *intravaginal use*. By cutting off the tip
of the narrow soft end, the contents can be extruded
through an intact hymen for *intravaginal use*. And
it is readily adaptable to *topical application* for
labial involvement, and/or *intravaginal use* to treat
mucosal infection.

CANDEPTIN (candicidin) provides:

Rapid results

Prompt, symptomatic relief—itching, burning,
and discharge subside in 48-72 hours!

Soothing, miscible ointment permits complete
contact with affected tissue.

Usually cures in a single 14-day course of therapy.^{2,3,4}

Safe

Exact dosage assured.^{2,3}

No side effects, clinical reports of irritation or
sensitization extremely rare.

Convenience

Easy to use intravaginally and/or topically
for labial involvement.

Encourages patient acceptance and cooperation.
Therapy is easy to start in your office.

Clinical proof of potency

CANDEPTIN (candicidin) is significantly more potent
in vitro than nystatin.⁵ CANDEPTIN Vaginal Ointment
and Tablets have a clinical record of cure rates
of 90% and more in pregnant and non-pregnant
patients.^{1,4,6} In recent studies on CANDEPTIN
VAGELETTES Vaginal Capsules, involving both gravid
and non-gravid patients, a 100% culture-confirmed
cure rate was achieved with a single 14-day
course of therapy.^{2,3}

Unique

CANDEPTIN® (candicidin)
VAGELETTES™ Vaginal Capsules



Description: CANDEPTIN (candidin)

Vaginal Ointment contains a dispersion of candidin powder equivalent to 0.6 mg. per gm. or 0.06% Candidin activity in U.S.P. petrolatum. 3 mg. of Candidin is contained in 5 gm. of ointment or one applicatorful. CANDEPTIN Vaginal Tablets contain Candidin powder equivalent to 3 mg. (0.3%) Candidin activity dispersed in starch, lactose and magnesium stearate. CANDEPTIN VAGELETES Vaginal Capsules contain 3 mg. of Candidin activity dispersed in 5 gm. U.S.P. petrolatum.

Action: CANDEPTIN Vaginal Ointment, Vaginal Tablets, and VAGELETES Vaginal Capsules possess anti-monomial activity.

Indications: Vaginitis due to *Candida albicans* and other *Candida* species.

Contraindications: Contraindicated for patients known to be sensitive to any of its components. During pregnancy manual Tablet or VAGELETES Capsule insertion may be preferred since the use of the ointment applicator or tablet inserter may be contraindicated.

Caution: During treatment it is recommended that the patient refrain from sexual intercourse or the husband wear a condom to avoid re-infection.

Adverse Reaction: Clinical reports of sensitization or temporary irritation with CANDEPTIN Vaginal Ointment, Vaginal Tablets or VAGELETES Vaginal Capsules have been extremely rare.

Dosage: One vaginal applicatorful of CANDEPTIN Ointment or one Vaginal Tablet or one VAGELETES Vaginal Capsule is inserted high in the vagina twice a day, in the morning and at bedtime, for 14 days. Treatment may be repeated if symptoms persist or reappear.

Available Dosage Forms: CANDEPTIN Vaginal Ointment is supplied in 75 gm. tubes with applicator (14-day regimen requires 2 tubes). CANDEPTIN Vaginal Tablets are packaged in boxes of 28, in foil with inserter—enough for a full course of treatment. CANDEPTIN VAGELETES Vaginal Capsules are packaged in boxes of 14 (14-day regimen requires 2 boxes.)

Store under refrigeration to insure full potency.

Federal law prohibits dispensing without prescription.

References: 1. Olsen, J.R.: *Journal-Lancet* 85: 287 (July) 1965. 2. Giorlando, S.W.: *Ob/Gyn Dig.* 13: 32 (Sept.) 1971. 3. Decker, A.: Case Reports on File, Medical Department, Julius Schmid. 4. Giorlando, S.W., Torres, J.F., and Muscillo, G.: *Am. J. Obst. & Gynec.* 90: 370 (Oct. 1) 1964. 5. Lechevalier, H.: *Antibiotics Annual 1959-1960*. New York, Antibiotica Inc., 1960. pp. 614-618. 6. Friedel, H.J.: *Maryland M.J.*, 15: 36 (Feb.) 1966.

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CANDEPTIN®
(candidin)
Vaginal Tablets
Vaginal Ointment
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Vaginal Capsules

(Continued from Page 799)

their cooperation, constructive criticism and devotion to the improvement of patient care by filling out these forms, they are helping to accomplish the following:

1. The Ambulance Companies

The forms provide a valuable record of performance to the ambulance companies themselves—they can be of use as trip tickets—document the degree of participation of each squad member, and when used for discussion purposes, serve as case reports for study and comment.

2. Planning Agencies

The forms are an invaluable guide to planning agencies. They indicate whether or not there is effective distribution of ambulance services, particularly in areas where there are times of peak loads. They also indicate areas in which there is either an inadequate number of ambulances or, as in some areas in New York State, too many, with the result that minimal ambulance use provides too little opportunity for personnel to maintain their skills. To local emergency planning committees, the forms have provided the information which allows them to maintain an index of performance.

3. The New York State Health Department

Forms have been of value to the Health Department indicating areas which should be further emphasized in training courses. They are helping the State determine the value or need for revision of standards as well as ways and the degree to which existing standards are being met. They indicate to the Department areas in need of strengthening service capability.

4. The Ambulance Attendant

The list of questions to be answered becomes a check list which many conscientious attendants know is an essential as a constant reminder of the things which must be carried out for maximum safety of any trip. So the form in itself is a sort of continuing training instrument.

5. *The Hospital*

The form is designed so as to be incorporated as part of the patient's in-hospital chart if the hospital so desires.

Information such as knowing which pupil dilated first or which limb was paralyzed first or twitching or what the change has been in the color of patient, the degree of consciousness, the rate of the pulse and, when possible, the change in blood pressure, are of tremendous help to the receiving physician or other emergency department personnel in determining immediate action which has to be taken.

As pre-hospital emergency support becomes more sophisticated, and ambulance attendants (under two-way radio communication with physicians in emergency departments to whom vital signs have been telemetered) are trained to give drugs, defibrillate, and give intravenous solutions, an accurate record which can be incorporated in the patient's chart will become essential.

6. *The Federal Government*

Just as the forms on a statewide basis have allowed areas to compare their indices of performance with other comparable areas within the State, so the national adaptation of a uniform reporting system will allow states to compare their own performance with other comparable states and will indicate to the Federal Government areas in the country which are in the greatest need of support.

7. *Intermediaries and Third Parties*

The forms can be used to satisfy increasing intermediary and third party requirements of justification for payment by accurately documenting all services that the ambulance crew has provided.

8. *Malpractice Suits*

There can be no greater protection against malpractice suits than an accurate documentation of the pre-emergency room care that was provided.

Standard reporting ambulance forms are now being used on a voluntary basis by over 250 companies in New York State and statistics are being computerized and analyzed for 13,000 cases per month.

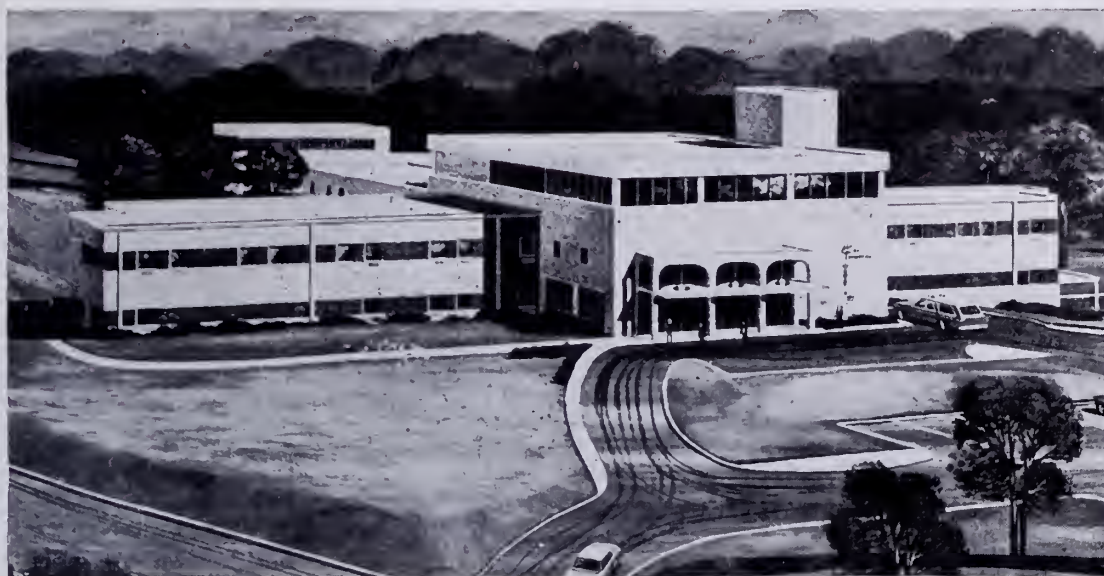
There are many questions being asked about the practicability of the use of a form on every run. The answer is that just as every in-hospital operative procedure, no matter how large or small, must be documented and incorporated in the patient's unit chart, so too has the time come when every ambulance run and the emergency services that have been provided should be documented.

This is a synopsis of some of the benefits which in the end will accrue to the better care of the patients through the use of a uniform reporting form.

Research Indicates Prostaglandins May Cause Sickle Cell Crises

"Crisis" attacks in sickle cell anemia may be triggered or enhanced by one type of prostaglandins, fatty acids manufactured in many body tissues. In sickle cell anemia—a hereditary blood disease found primarily in blacks—red blood cells become elongated and crescent-shaped, like sickles. Unlike normal red cells, they have difficulty passing through the smaller blood vessels. As a result, blood flow is impeded and the oxygen supply to various tissues is reduced, causing pain and, often, malfunction of organs and disability.

Stanford University investigators found that Prostaglandin E2 induced increased sickling in the red cells of sickle cell patients. Their experiment followed the observation that certain symptoms of sickle cell crises, such as inflammation and fever, simulated symptoms which can be induced by prostaglandin injections. The next step, said Dr. Paul L. Wolf, is to try and find drugs that can inhibit prostaglandin action.



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For Intensive Treatment of Psychiatric Disorders

This 113-bed non-governmental psychiatric hospital provides modern facilities for diagnosis and treatment of patients with all degrees of illness, including those who show severely disturbed behavior. Alcoholic and drug abuse patients are also accepted.

In addition to care by psychiatrists and by consultants in all medical specialties, the treatment program includes occupational, recreational, and physical therapy, social services, and tutoring. Emphasis is on short-term, intensive treatment of voluntary patients.

Hill Crest is a member of: American Hospital Association, National Association of Private Psychiatric Hospital, Alabama Hospital Association, Birmingham Regional Hospital Council.

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New Procedure Averts Gallstone Surgery

It's bad enough to have surgery once for gallstones—but thousands of Americans must undergo the operation a second time, because stones are overlooked or retained in the body. Now, a San Francisco radiologist (x-ray specialist) has reported a technique which he says can avert second operations.

Not even anesthesia is needed, Dr. H. Joachim Burhenne told a recent meeting of the American Roentgen Ray Society. As he described his study:

A catheter, or tube, used for drainage after surgery, was left in the incision for one week, then patients were x-rayed to see if any stones remained.

If so, the original tube was removed and a specially designed catheter inserted. Then a wire with a tiny "basket" at the end was guided, under x-ray, through the catheter and fitted over the retained stone, which then was withdrawn.

Seventeen patients have successfully undergone the "roentgenologic stone extraction," Dr. Burhenne said. The procedure failed in only one patient.

No premedication or local anesthetic was necessary and no complications occurred during the removal, said Dr. Burhenne, who is associated with the Children's Hospital and Adult Medical Center.

Patients felt only dull or mild pain. And although the length of the procedure has varied, it has shortened with experience. None of the recent cases took longer than

45 minutes, Dr. Burhenne said.

Another research development may one day help people avoid gallbladder surgery in the first place. Mayo Clinic investigators recently reported that a drug dissolved gallstones in four women (gallstones are more common in women than men). The drug is chenodeoxycholic acid, a naturally occurring bile acid.

In one woman, stones present for more than six years disappeared after she took the acid for six months. Stones were reduced in size and/or number in the other patients.

Chenodeoxycholic acid also is being tested at two London hospitals and one recent report said gallstones of two patients had almost disappeared.

Gallstones are formed mainly from cholesterol and cause trouble when one or more gets big enough to block a bile duct. The bile acid treatment is based on earlier observations that patients with cholesterol gallstones had a markedly reduced "bile acid pool." One component of bile—lecithin—can dissolve cholesterol, thus it was believed that an increase in bile might affect the gallstones.

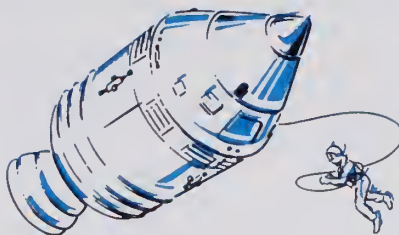
Gallbladder disease is common in the United States, affecting an estimated 12 million women and 4 million men. About 330,000 gallbladders are removed each year because of stones and the medical costs of the disease total almost \$1 billion a year. The ailment causes about 6,000 deaths per year.

New AMA Drug Evaluation To Be Published

CHICAGO—Editorial work has been completed on the second edition of the American Medical Association's massive encyclopedia of prescription drugs—AMA Drug Evaluations—and the new volume will be published later this year.

The book will describe some 1,300 prescription drugs in sufficient depth and detail

to permit physicians in practice to evaluate the possible benefits and possible side effects of use of these products in their patients. Some 30 new drugs have been added since the first edition was published in March, 1971. However, some of the drugs listed in the first edition have since been withdrawn from the market and no longer will be included in the new version.



Man in space, now fait accompli, re-emphasizes the importance of Uro-Phosphate therapy. Research into the effect of space travel on the astronaut reveals that weightlessness causes loss of bone calcium. As the bones are required to bear less and less of the weight of the body they lose calcium, increasing the calcium content of the urine. When physical activity is reduced, the acidity of the urine should be adjusted to keep increased calcium in solution . . . a prophylaxis to prevent kidney or bladder calculi.

Uro-Phosphate®

NOW A SUGAR-COATED TABLET

Each tablet contains: METHENAMINE, 300 mg.; SODIUM ACID PHOSPHATE, 500 mg.

Uro-Phosphate gives comfort and protection when inactivity causes discomfort in the urinary function. It keeps calcium in solution, preventing calculi; it maintains clear, acid, sterile urine; it encourages

complete voiding and lessens frequency when residual urine is present.

Uro-Phosphate contains sodium acid phosphate, a natural urinary acidifier. This component is fortified with methenamine which is inert until it reaches the acid urinary bladder. In this environment it releases a mild antiseptic keeping the urine sterile.

Uro-Phosphate is safe for continuous use. There are no contra-indications other than acidosis. It can be given in sufficient amount to keep the urine clear, acid and sterile. A heavy sugar coating protects its potency.

Dosage:

For protection of the inactive patient 1 or 2 tablets every 4 to 6 hours is usually sufficient to keep the urine clear, acid and sterile.

2 tablets on retiring will keep residual urine acid and sterile, contributing to comfort and rest.

A clinical supply will be sent to physicians and hospitals on request.



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All Mudranes are bronchodilator-mucolytic in action, and are indicated for symptomatic relief of bronchial asthma, emphysema, bronchiectasis and chronic bronchitis. **MUDRANE tablets** contain 195 mg. potassium iodide; 130 mg. aminophylline; 21 mg. phenobarbital (Warning: may be habit-forming); 16 mg. ephedrine HCl. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline-phenobarbital-ephedrine combinations. **Iodide side-effects:** May cause nausea. Very long use may cause goiter. Discontinue if symptoms of iodism develop. **Iodide contraindications:** Tuberculosis; pregnancy (to protect the fetus against possible depression of thyroid activity). **MUDRANE-2 tablets** contain 195 mg. potassium iodide; 130 mg. aminophylline. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline. **Iodide side-effects and contraindications** are listed above. **MUDRANE GG tablets** contain 100 mg. glyceryl guaiacolate; 130 mg. aminophylline; 21 mg. phenobarbital (Warning: may be habit-forming); 16 mg. ephedrine HCl. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions** are those for aminophylline-phenobarbital-ephedrine combinations. **MUDRANE GG-2 tablets** contain 100 mg. glyceryl guaiacolate; 130 mg. aminophylline. **Dosage** is one tablet with full glass of water, 3 or 4 times a day. **Precautions:** Those for aminophylline. **MUDRANE GG Elixir.** Each teaspoonful (5 cc) contains 26 mg. glyceryl guaiacolate; 20 mg. theophylline; 5.4 mg. phenobarbital (Warning: may be habit-forming); 4 mg. ephedrine HCl. **Dosage:** Children, 1 cc for each 10 lbs. of body weight; one teaspoonful (5 cc) for a 50 lb. child. Dose may be repeated 3 or 4 times a day. Adult, one tablespoonful, 4 times daily. All doses should be followed with $\frac{1}{2}$ to full glass of water. **Precautions:** See those listed above for Mudrane GG tablets.

MUDRANE—original formula

First choice

MUDRANE-2

*When ephedrine is too exciting
or is contraindicated*

MUDRANE GG

*During pregnancy or when K.I. is
contraindicated or not tolerated*

MUDRANE GG-2

A counterpart for Mudrane-2

MUDRANE GG ELIXIR

*For pediatric use
or where liquids are preferred*

*Clinical specimens
available to physicians.*

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Manufacturers of Ethical Pharmaceuticals



PHYSICIAN PLACEMENT SERVICE IN ALABAMA

The Physician Placement Service of the Medical Association of the State of Alabama is designed to assist both physicians and communities. MASA members having knowledge of practice opportunities or wishing to relocate their own practices are urged to communicate with the Placement Service. For further information: write Mr. Emmett Wyatt, Executive Assistant, Medical Association of the State of Alabama, 19 South Jackson Street, Montgomery, Alabama 36104, or Telephone 263-6441.

Locations Wanted

Anesthesiology—

Age 54; Medical College of Alabama, 1949; Board certified; seeking associate or institutional practice. LW-2/9

Age 46; King's College Hospital, London, England 1952; Board certified; seeking solo or group practice. LW-2/10

General Practice—

Age 27; Univ. of Tennessee, 1970; seeking group practice; Available July 1973. LW-3/1

Age 31; University of Kansas, 1966; seeking associate or group practice; Available July 1973. LW-3/2

Age 32; University of Texas, Southwestern, 1968; seeking institutional practice; Available January 1973. LW-3/3

Age 45; University of Alabama, 1963; Available July 1973. LW-3/9

Age 31; St. Louis University, 1966; National Board; seeking associate practice. LW-3/10

Age 32; University of Missouri, 1965; National Board; Board eligible, 1974; seeking solo, associate or group practice; Available Spring of 1973.

Internal Medicine—

Age 31; University of Miami, 1964; Board certified, seeking group or institutional practice. Available January 1973. LW-4/7

Age 30; Univ. of Virginia, 1967; Board eligible; seeking group practice; Available June 30, 1973. LW-4/15

Age 30; Vanderbilt University, 1967; National Board; Board eligible; seeking solo, associate, or group practice; Available July, 1973. LW-4/16

Age 34; Georgetown University, 1964; Board certified; seeking group, associate or institutional practice; Available July 1973. LW-4/18

Age 40; University of Kentucky, 1969; Board eligible; seeking solo, associate, group or institutional practice; Available July 1973. LW-4/19

Age 32; Temple University, 1966; National Board, Board eligible; seeking group practice; Available late summer 1973. LW-4/19

Age 38, Ohio State University, 1963; National Board, Board eligible; seeking group or institutional practice; Available September, 1973. LW-4/22

Age 31; Vanderbilt University, 1967; National Board, Board eligible; seeking associate or group practice; Available July 1973. LW-4/23

Neurology

Age 30; Northwestern University, 1967; National Board; Board eligible; seeking solo, associate, or group practice; Available June 1973. LW-5/1

Age 28; University of Pennsylvania, 1969; National Board, Board eligible; seeking associate or group practice. LW-5/6

Ophthalmology—

Age 31; Chicago Medical School, 1966; National Board; seeking associate or group practice; Available July, 1973. LW-6/6

Age 31; Bowman Gray, 1967; Board eligible; seeking solo, associate or group practice; Available June 30, 1973. LW-6/10

Age 31; S.U.N.Y., Downstate Medical School 1966; National Board, Board certified; seeking solo or group practice; Available July 1973. LW-6/19

Orthopedic Surgery—

Age 31; University of Alabama, 1966; National Board; Available July, 1973. LW-14/4

Age 31; Baylor, 1966; Board eligible; seeking associate practice; available July, 1973. LW-14/5

Age 30; University of Illinois, 1967; Board eligible; seeking group or associate practice; Available June 1974. LW-14/8

Age 34; University of Michigan, 1964; Board eligible; seeking solo, associate, group or industrial practice; Available January 1974. LW-14/20

Age 32; Emory University, 1966; Board eligible; seeking associate or group practice; Available August 1973. LW-14/21

(Continued on Page 810)

What's on your patient's face...

may be more important than his chief complaint

Patient P.T.* seen on 3/29/67 shows typical lesions of moderately severe keratoses. Note residual scarring on ridge of nose from previous cryosurgical and electrosurgical procedures.



Patient P.T.* seen on 6/12/67, seven weeks after discontinuation of 5% FU cream. Reaction has subsided. Residual scarring not seen except that due to prior surgery. Inflammation has cleared and face is clear of keratotic lesions.

*Data on file, Hoffmann-La Roche Inc., Nutley, N.J



The lesions on his face
are solar/actinic—
so-called "senile" keratoses...
and they may be premalignant.

Solar, actinic or senile keratoses

These lesions may be called by several names, but they can be identified by the following characteristics. The typical lesion is flat or slightly elevated, of a brownish or reddish color, papular, dry, rough, adherent and sharply defined. They commonly occur as multiple lesions, chiefly on the exposed portions of the skin.

Sequence of therapy— selectivity of response

After several days of therapy with Efudex® (fluorouracil), erythema may begin to appear in the area of the lesions; the reaction usually reaches its height of unsightliness and discomfort within two weeks, declining after discontinuation of therapy. This reaction occurs in affected areas. Since the response is so predictable, lesions that do not respond should be biopsied.

Acceptable results

Treatment with Efudex provides highly favorable cosmetic results. Incidence of scarring is low. This is particularly important with multiple facial lesions. Efudex should be applied with care near the eyes, nose and mouth.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Multiple actinic or solar keratoses.

Contraindications: Patients with known hypersensitivity to any of its components.

Warnings: If occlusive dressing used, may increase inflammatory reactions in adjacent normal skin. Avoid prolonged exposure to ultraviolet rays. Safe use in pregnancy not established.

Precautions: If applied with fingers, wash hands immediately. Apply with care near eyes, nose and mouth. Lesions failing to respond or recurring should be biopsied.

Adverse Reactions: Local—pain, pruritus, hyperpigmentation and burning at application site most frequent; also dermatitis, scarring, soreness and tenderness. Also reported—insomnia, stomatitis, suppuration, scaling, swelling, irritability, medicinal taste, photosensitivity, lacrimation, leukocytosis, thrombocytopenia, toxic granulation and eosinophilia.

Dosage and Administration: Apply sufficient quantity to cover lesion twice daily with nonmetal applicator or suitable glove. Usual duration of therapy is 2 to 4 weeks.

How Supplied: Solution, 10-ml drop dispensers—containing 2% or 5% fluorouracil on a weight/weight basis, compounded with propylene glycol, tris(hydroxymethyl)-aminomethane, hydroxypropyl cellulose, parabens (methyl and propyl) and disodium edetate.

Cream, 25-Gm tubes—containing 5% fluorouracil in a vanishing cream base consisting of white petrolatum, stearyl alcohol, propylene glycol, polysorbate 60 and parabens (methyl and propyl).



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Nutley, N.J. 07110

This patient's lesions were resolved with

Efudex®
fluorouracil/Roche®

5% cream/solution...a Roche exclusive

PLACEMENT SERVICE

(Continued from Page 807)

Otolaryngology—

Age 30; Medical College of Georgia, 1966; Board certified; seeking solo, associate or group practice; Available summer, 1973. LW-16/3

Age 30; Creighton Medical College, 1966; National Board, Board certified; seeking solo, associate or group practice; Available July 1973. LW-16/4

Pathology—

Age 32; Bowman Gray School of Medicine, 1965; Board certified; seeking Hospital practice with or without associate. LW-8/12

Pediatrics

Age 30; Kansas University, 1968; National Board, Board eligible; seeking associate or group practice; Available August 1973. LW-9/9

Radiology—

Age 43; Univ. of Tennessee, 1962; Available July 1, 1973. LW-10/10

Surgery—

Age 33; University of Maryland, 1965; seeking solo, group, or associate practice; Available July 1973. LW-11/7

Age 35; Univ. of Oklahoma, 1964; Board eligible; seeking associate or group practice; Available Jan. 1, 1973. LW-11/14

Age 42; Tulane University, 1955; Board certified; seeking associate, group or industrial practice; Available January 1973. LW-11/16

Urology—

Age 35; Univ. of Miami, 1964; National Board; Board eligible; seeking associate, group, or institutional practice; Available Jan. 1973. LW-12/5

Age 32; University of Kentucky, 1968; Board eligible; seeking solo, Associate or group practice; Available July 1973. LW-12/8

Age 32; University of South Carolina, 1966; Board eligible; seeking associate or group practice; Available August 1973. LW-12/9

Physicians Wanted

General Practitioners—

Physician wanted for general practice, group or associate, in University town of 40,000 population. Salary and partnership negotiable. PW-1

General Practitioner wanted for multi-specialty group practice on Bay in South Alabama. Modern

offices, near hospital. Salary with incentive available. Excellent churches, schools and recreational facilities. PW-2

Associate wanted in a three physician general practice in a rural county near Mobile. Salary initially with anticipated early partnership arrangement. 30-bed county hospital adjoining the office. PW-3

Opportunity for General Practitioner in South Alabama community with a service area of 20,000 to 25,000 population. Modern hospital with certified surgeon, radiologist, and cardiologist on staff. Present physicians interested in partner, forming Professional Association or may enter into private practice. Free office space available, or physicians in the area interested in building new office building. Excellent school system with junior college within 15 miles. PW-4

Special Openings—

Opportunity for Cardiologist interested in hospital based practice centering around special procedures in cardiology, including cardiac catheterization, coronary arteriography, pacemaker work, preoperative and postoperative care of cardiac surgical patients in Montgomery. PW-5

General Surgeon and Ophthalmologist wanted for community of 22,000 population and 45,000 service area. New hospital with eight general practitioners and one Board certified radiologist. Schools for blind and deaf located in the town. Excellent schools and recreational facilities. PW-6

Family physician needed as associate with well established physician in small North Alabama town. Modern, fully equipped hospital. Office space and equipment available. Salary negotiable plus other benefits. PW-4/1

Opportunity for young internist or family physician to join three man group in rapidly growing town of 12,000 population in Tennessee Valley. Excellent hospital. Modern well-equipped office. PW-7

Internist wanted, Board certified, Town of 10,000 population, Southwest Alabama. New 51-bed general hospital, I.C.U. Physicians: 5 GPs, Certified Surgeon and Radiologist. Within easy access, excellent fresh and salt water fishing, hunting including deer and turkey. Public and private schools. One hour drive from two metropolitan areas. PW-18

Wanted, internists, generalists, radiologist, orthopedist, general surgeons, town of 15,000 population in county of 45,000 population in southeast Alabama. Attractive for a group setup. High income area and marked scarcity of physicians. Excellent schools and recreational facilities. Newly expanded hospital. PW-17

PLACEMENT SERVICE

Wanted: Immediately. Pediatrician to replace recently deceased partner in northeast Alabama. Enter busy practice in a predominantly GP area. Enjoy rural, quiet living with nearby scenic and recreational facilities. Salary, practice, everything negotiable. PW-19

Wanted: General Practitioner or Internist to join active 4-M. D. professional association—3-GP's, 1 Board Surgeon. Modern offices, accredited 75 bed hospital. Beautiful town of 10,000 with excellent churches, schools (public and private). Salary for 3-6 months then arrangement for full partnership. PW-22

For town of 2,000 population located in trade area of 15,000 population in northeast Alabama. Nearest metropolitan centers 30 miles distance. Industrial area. Clinic and some office equipment available. Several churches, schools, and civic clubs. PW-23

Opportunity for GP to join well established four-man partnership; three general practitioners and one board certified surgeon. Practice located in city of 8,000 population, trade area of 60,000, north-central Alabama. Modern new partnership-owned offices adjacent to modern 125-bed fully accredited hospital. Salaried first year with possible partnership status at end of first year. PW-27

Wanted, General Practitioner, Orthopedic Surgeon, General Surgeon to replace recently deceased associate, large Industrial Clinic in Birmingham. Modern Office space. Salary negotiable. PW-28

For community of 1,500 population located in south Alabama near city of 12,000 population. Hospitals located within 25 miles. Office space and equipment available. Farming, cattle and textile industries in the area. Several churches and school. Civic clubs and golf courses. PW-1-1

Opportunity for two general practioners to assist two established GP's in a progressive comprehensive medical program in rural county of

12,500 population. Modern new office building, fully equipped, located in county seat, 20 miles west of Montgomery, Alabama. Excellent salary. Several churches, school, and recreation areas. PW-1/8

Opportunity in town of 3,000 population located in trade area of 12,000 population in south Alabama. 23-bed hospital. Office space available. Numerous churches and schools. Recreational areas nearby. PW-1/11

Opportunity for associate in general practice or take over general practice in town of 1,200 population in south central Alabama with trade area of 5,000 population. Well established practice and well equipped office. Located near recreational area. PW-1/12

Opportunity in town of 3,000 population in trade area of 15,000 located in West Alabama. Clinic building available with equipment. Farming and several small industries. Several schools and churches. PW-1/13

Opportunity in south Alabama in town of 2,700 population, trade area of 15,000 population. Nearest large city of 30,000 population located 45 miles. Nearest hospital is 10 miles. One physician now engaged in practice in the town. Necessary arrangements will be made for office space, equipment, and housing. Industrial and agricultural area. Churches, schools, civic and social activities. PW-30

Partner wanted in general practice. Recent death of previous associate. Large family practice located in a suburb of Mobile. Excellent hospitals. PW-31

Opportunity in southeast Alabama in town of 3,000 population, trade area of 15,000 population. Nearest large city, 8 miles, 40,000 population, and 2 large hospitals. Office space and housing readily available. Industrial and agricultural area. Churches, schools, civic and social activities. PW-35

Obstetrician-gynecologists work the most hours per week, 55, while psychiatrists have the shortest workweek, 47 hours, a survey of physicians by the American Medical Association showed.

Mobile Montag



The Annual Luncheon of the Woman's Auxiliary to the Medical Association of the State of Alabama honored (from left) Mrs. Erle E. Wilkinson, President, Woman's Auxiliary to the Southern Medical Association; Mrs. Robert F. Beckley, President, Woman's Auxiliary to the American Medical Association; and Mrs. George Hansberry, President of WAM-ASA.



Dr. E. E. Camp, President, chats with Dr. F. M. Phillippi, Jr., Immediate Past President, and program participant, Mr. Shearen Elebash.



Mr. L. L. L. Golden, Saturday Review Columnist, discusses the agenda of the Awards Dinner with H. C. Mullins, M. D., Master of Ceremonies.



Shown at the Awards Dinner are past presidents, Dr. Archie E. Thomas, Montgomery; Dr. and Mrs. John Martin, Montgomery, and Dr. J. G. Daves, Cullman.



The University of Alabama Alumni dinner was held on Thursday night at the Admiral Semmes Hotel. Dr. Richard Brown (left) and Dr. A. T. Baugh, Jr., are shown presenting Miss Virginia Baxley with a check from the Alumni Association in appreciation of her years of service.

Annual Session '73

The Annual ALAPAC Luncheon was held Friday. Featured speaker was Mrs. Otis Bowen, wife of the Governor of Indiana. Shown at right is Lt. Governor Jere Beasley, Mrs. Bowen, and Dr. Grover C. Murchison, ALAPAC Board Chairman.



Mrs. F. M. Phillippi, Jr., Dr. Phillippi, and Mr. Golden at the Awards Dinner.



Four members of the Fifty Year Club honored at the Awards Dinner were Drs. W. L. Miller, Henry G. Ford, W. H. Y. Smith, and C. G. Godard.



Mrs. Ruth Johnson, State Auxiliary ALAPAC Chairman, is shown with Mr. Bill Watson, Executive Director of AMPAC, and Mrs. John M. Chenault, member of the AMPAC Board of Directors.

The Awards Dinner, highlight of the Annual Meeting, was held on Friday night at the Admiral Semmes Hotel. Shown at right (from left) are Award winners Mr. Joel E. Johnson, Geneva; Mrs. Carol W. Wyatt, Talladega; Dr. Betty W. Vaughan, Decatur; and Dr. E. L. Gibson, Enterprise.



Amphetamine Use Should Be Limited, Committee Says

The use of amphetamines to curb obesity in children, to help students "cramming" for examinations, or to stimulate athletic performance has been condemned by the American Academy of Pediatrics.

Noting that amphetamine abuse has been the subject of recent public attention in the United States and elsewhere, the committee said "at present there are only two valid indications for use of amphetamines in childhood":

- The hyperkinetic syndrome. Such "overactive" children comprise about 3 per cent of the grade school population, and usually suffer from short attention span, learning difficulties, and poor impulse control. The condition apparently resolves itself spontaneously in most cases by puberty. No major problems with the use of amphetamines in such cases have been discovered, the committee said.

- Narcolepsy. This is a lifelong disorder characterized by excessive daytime sleep patterns. It is a relatively rare condition, and the dosage required for treatment is in the low range.

Electrocoagulation In Cancer Treatment Returns

There is renewed interest in treating cancer by electrocoagulation, the destruction of tissue by electric current heat, according to two University of Rochester, New York surgeons. Drs. W. Bradford Patterson and Sidney H. Sobel said the method fell into disrepute, after long use, because some physicians would merely "cook" the cancer surface, leaving the roots to spread. Recently, however, there have been reports that 5-year cures could be achieved by careful electrocoagulation. In addition, there are indications that the treatment provokes immunity. The surgeons demonstrated in animal studies that heating a tumor made the animal more resistant to subsequent inoculations of the same tumor, than simply excising the tumor.

Pedal Car May Be Vehicle Of The Future

At some future Christmastime, you may give a pedal car—not to your little boy or girl but to yourself, for health and ecology reasons. Soon to go on the market is a \$550 pedicar, capable of going 13 to 15 miles an hour and designed for short trips around town. The driver pedals it with no more effort, say the manufacturers, than the average person would use in walking. A special "linear torque" drive system is the key, according to officials of Environmental Trans-Sport Corp., Windsor, Conn. The driver can pump with only one foot, or depress both pedals when extra power is needed. The car, 4 feet high and 3 feet wide, weighs about 100 pounds and has four bicycle-type spoke wheels. It will accommodate an adult up to 6'-4", with room left for a small child and a couple of bags of groceries. Robert L. Bundschuh, aircraft engineer, designed the car, which has been driven by heart specialist and bicycling advocate Dr. Paul Dudley White, who reacted favorably. Dr. White tooled around on snow-packed roads in 9-degree weather. He was 84 at the time.

Gum Tissue Exams May Aid In Diabetes Detection

Dentists may be able to help in detecting early-stage diabetes, studies by Boston University dental scientists suggest. The investigators, working with mice, detected the disease by examining blood vessels in gingival (gum) tissue. Diabetes involves not only an insulin deficiency but also blood vessels. When vessel involvement is severe, a membrane in smaller vessels thickens. This could be detected through a relatively painless biopsy performed by dentists who treat gum disease, the scientists said. The need for detection is great—about half the estimated 3 million Americans who have diabetes don't know it. The Boston study was supported by the National Institute of Dental Research.



Spasm reactor?

Donnatal!

each tablet,
capsule or 5 cc.
teaspoonful
of elixir
(23% alcohol)

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Donnatal
No. 2

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atropine sulfate	0.0194 mg.	0.0194 mg.	0.0582 mg.
hyoscine hydrobromide	0.0065 mg.	0.0065 mg.	0.0195 mg.
phenobarbital	($\frac{1}{4}$ gr.) 16.2 mg.	($\frac{1}{2}$ gr.) 32.4 mg.	($\frac{3}{4}$ gr.) 48.6 mg.

(warning: may be habit forming)

Brief summary. Adverse Reactions: Blurring of vision, dry mouth, difficult urination, and flushing or dryness of the skin may occur on higher dosage levels, rarely on usual dosage. Contraindications: Glaucoma; renal or hepatic disease; obstructive uropathy (for example, bladder neck obstruction due to prostatic hypertrophy); or hypersensitivity to any of the ingredients.

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About 20 mg. Vitamin C in one baked potato (2½" diameter).

To many people the evening meal just isn't complete without potatoes. But your patient would have to eat 15 of them (skins and all!) to get as much Vitamin C as is contained in just one Allbee with C capsule taken daily. A bottle of 30 (month's therapeutic dose) supplies as much ascorbic acid as 450 potatoes, plus full therapeutic amounts of the B-complex vitamins. For the patient who is counting calories, Allbee with C is small potatoes because the B's and C are water soluble. Consider the number of calories in 15 potatoes, not to mention the mountain of butter and sour cream. Allbee with C is available at pharmacies in the handy bottle of 30 and the economy size of 100 on your prescription or recommendation.

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A·H·ROBINS



Heart Attack Patients Often Delay Seeking Help

Patient delay in seeking medical assistance is the largest contributor to out-of-hospital deaths from heart attacks, an article in the current (Nov. 27) issue of the *Journal of the American Medical Association* reports.

"By far the greatest delay in the care of a patient with an acute myocardial infarction was his own unwillingness to call for help," declare M. D.'s Manning Feinleib and Michael J. Davidson.

The researchers, from the National Heart and Lung Institute in Bethesda, Md., report four major factors in patient delay (1) Delay in recognizing symptoms, (2) Denial of severity of symptoms, (3) Delay in seeking medical assistance, and (4) Delay in arriving at a medical facility.

Heart attack is the leading cause of death in the United States today, accounting for approximately 400,000 deaths each year, of which close to 250,000 are estimated to occur outside a medical facility, the doctors report.

"Most experts agree that the mobile unit concept (an elaborately equipped and staffed vehicle to assist heart attack patients) is not the final answer to the serious problem of reducing the high mortality of coronary heart disease."

The two doctors offer a five-point plan for reducing out-of-hospital deaths from heart attack:

- (1) Develop a nationwide network of 24-hour out-patient diagnostic centers, or cardiac checkpoints, to provide quick evaluation and screening of self-referred or physician-referred patients;
- (2) Develop less toxic, more effective drugs that may be self-administered to prevent heart failure in coronary heart disease patients;
- (3) Increase availability of emergency equipment and drugs at such public facilities as stadia, airports and railroad stations;

- (4) Identify and educate the "coronary prone" individuals in society;

- (5) Teach a greater understanding of the patient's "care-seeking process" which will enable him to know when to seek medical help quickly.

The mortality survey was taken in an affluent suburban area in the southeastern portion of Montgomery County, Maryland, involving a population of 250,000 people.

New Research May Help Patients Paralyzed From Spine Injuries

Rapidly accumulating new research knowledge now offers substantial hope that permanent paralysis from spinal cord injuries may be prevented or lessened, says an editorial in the December issue of the *Archives of Neurology*, a professional publication of the American Medical Association.

Some 125,000 individuals in the United States are paralyzed from injuries to the spinal cord, the editorial reports. Co-authors are Franklin C. Wagner, Jr., M. D., of New Haven, Conn., and Paul C. Bucy, M. D., of Chicago.

Some 5,000 to 10,000 people are added to this list each year. Most of the new patients are young—18 to 25 years—and 84 percent of them are young men. Drs. Wagner and Bucy cite a recent Armed Forces estimate that caring for each spinal-cord injured patient from the time of injury to time of death costs \$900,000.

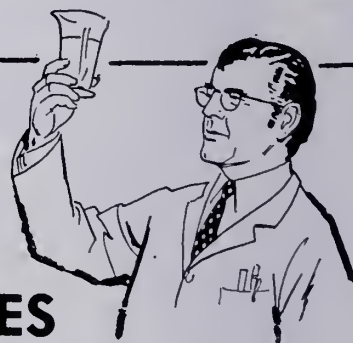
It has long been assumed that nothing much could be done by medical science to alter the paralysis that follows injury to the spinal cord.

Recently, the editorial states, interest has been rekindled in basic research seeking to learn what happens in the spinal cord within minutes and hours of an injury that produces either a temporary or a permanent paralysis.

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Before deciding to make Valium (diazepam) part of your treatment plan, check on whether or not the patient is presently taking drugs and, if so, what his response has been. Along with the medical and social history, this information can help you determine initial dosage, the possibility of side effects and the ultimate prospects of success or failure.

While Valium can be a most helpful adjunct to your counseling, it should be prescribed only as long as excessive psychic tension persists and should be discontinued when you decide it has accomplished its therapeutic task. In general, when dosage guidelines are followed, Valium is well tolerated (see Dosage). For convenience it is available in 2-mg, 5-mg and 10-mg tablets.

Drowsiness, fatigue and ataxia have been the most commonly reported side effects.

Until response is determined, patients receiving Valium should be cautioned against engaging in hazardous occupations requiring complete mental alertness, such as driving or operating machinery.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

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THE JOURNAL

of the

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L. P. Patterson Montgomery

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President's Page

Adrift On Jones Creek

It has been the pleasure of your President to have had the opportunity of spending the last week fishing on Jones Creek. Nothing in the world of which I am familiar gives a man the peace of mind and the opportunity to think things over as well as being in a boat alone with your fishing pole in your hand. Now, to those of you who are not familiar with Jones Creek, this is a beautiful body of water located at the foot of Sand Mountain in Jackson County, Alabama. The craggy mountains almost completely surround this lake of several hundred acres, and on some of these slopes, beautiful outcroppings of limestone rock are to be observed, and on some of these outcroppings mountain laurel is seen to be present and blooming in profusion. The scent of the mountain laurel is indeed something to be enjoyed. I wish that all of you might have an opportunity to some day visit Jones Creek or the Tennessee Valley, which is in the northern part of your beloved State of Alabama.

As the fleecy clouds raced across the sky, so did fleeting thoughts race through my meager mind. One tends in the solitude of the wilderness to think over many of the events of his life and the hopes and the aspirations for the future. This trip was no exception. Even in this beautiful wilderness area, I was impressed by one thing. The fact that many of the trees which were enjoyed last year and the year before were no longer with us, but had succumbed to the constant pounding of the waves and the water had finally overcome. We in medicine might be compared to these trees. We are being pounded by the political as well as the public. Everyone loves *his* doctor, but no one loves the profession. This, I think, should



DR. CAMP

give us pause to see if we can examine why this philosophy is held by so many. I think the real root of our problem in medicine today is scarcity of physicians. Our medical schools did not contemplate ten or 15 years ago that government would enter medicine in a huge way like the Medicare and Medicaid programs. These programs, while they have been of great benefit to many people, have over-burdened the profession in many areas of our country. These areas, which are particularly over-burdened, are in states such as Alabama, where many of our people live in rural areas. Many of these people have no large cities within a few miles of their place of residence.

This brings to mind something that I wish to mention with all the force I am capable of, and in order to service these people, we must maintain our county health units. Dr. Myers' request for eight million dollars for county health units has been cut to a meager five hundred thousand dollars. Now, let's really get behind this program and do something about it, and let every doctor contact his legislators and ask that this ridiculous figure be changed. I understand that Mental Health received twenty million dollars in the proposed budget versus five

hundred thousand dollars from the General Fund for the Health Departments, which are the real bed root of rural health. The State of Alabama in the year 1972 spent from the General Fund an average of 34 cents per person. With this sum before you, I make no further comment. I would like to point out that we only have 16 active health officers in the whole State of Alabama. Now, Gentlemen, if we want to see the county health departments disappear, let's just do nothing as we have done in the past, and I am sure this will occur. I have had the displeasure of living in a county in which they had no health officers, and I can tell you that it is not a pleasant place in which to live.

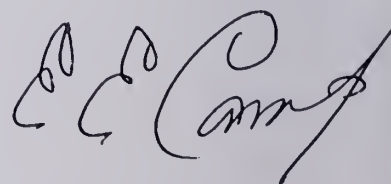
In regard to what we may be able to do in the private sector of medicine, your president does not claim to have the knowledge to make a few doctors able to see thousands of people, but I do have one or two suggestions which I would like to make for your consideration. The first of these, I firmly believe that properly located intermediate care hospitals with well-equipped and controlled ambulance services could go a long way toward servicing the emergency and people who are in need of very highly specialized care. I feel that it is a much more economical system to haul these to strategically located hospitals rather than to hope that some kind physician and his wife are going to move into a rural area. In the thirties, your president spent four years in a rural area in a village of three or four hundred people. I was the only doctor there. Even then, some of the more affluent people in the community did not use me except in case of emergency, or in case their physician in the nearby city refused to come when called. I am afraid that this situation still persists. I finally had my fill of this and moved to a larger place and almost within a matter of months, my income had caught root. Please pardon the personal experience, but I do feel that it is completely unrealistic to expect a young doctor and his bride to move into the extremely small rural areas, when the cities and larger towns have so

much more to offer, and even an opportunity to make a greater sum of money.

Our new ambulance laws which go into effect, I believe, in 1974, are fine, but as a result of the high standards which have been established by your Board of Censors, I feel that some type of public-supported system will be necessary to expedite these services. I doubt very much if many private people in the ambulance business can survive with the new requirements, which I think are both justified and needed for the good of the public, but make it economically unfeasible for private ownership.

There are also a few other things that we might think of in our state. We might think of changing our laws to permit well-qualified foreign physicians to come into our state. It seems that our basic science law more or less keeps out practically all of these people at the present time. Perhaps we could also increase our efficiency in the larger cities by maintaining outpatient departments where people who are in need of routine care may be serviced more efficiently than on an individual basis. I am not certain that this would be an ideal solution in many places, but I think it is one that each physician might consider in his own environment.

In conclusion, I would again ask all of you to help Dr. Myers get adequate funding for our county health units. Of the total amount of monies expended in Alabama last year, only one million one hundred seventy-one thousand was from state funds. From the General Fund, only four hundred and twenty-five thousand dollars was received. This amounts to approximately 34 cents per person. I believe I am correct in stating that Alabama is last in the amount of state funds expended for county health departments.



E. E. Camp, M. D.
President

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AUXILIARY PLEDGE

"I pledge my loyalty and devotion to the Woman's Auxiliary to the American Medical Association. I will support its activities, protect its reputation and ever sustain its high ideals."

Health Careers Council- Project Together

The purpose of "Project Together" is to promote better health care by placing a poster board containing mail back health career brochures in every physician's office in Alabama. In return, the physician is requested to make a tax deductible contribution of \$15 for one year or \$40 for three years. The check should be made out to Health Careers Council of Alabama.

Doctors' wives throughout the State will be visiting doctors' offices asking them to subscribe to this very worthwhile cause which will promote interest in young people entering the Allied Health Fields. Additional brochures can be obtained from Mr. Jack Hawkins, Jr., Director of Health Careers Council of Alabama, 901 South 18th Street, Birmingham, Alabama, 35205.

Funds from this project will be used to provide continuing education for public school counselors concerning health careers, and to expand the council efforts to include a statewide organization of Health Career Clubs. It will also be used to expand the clearinghouse of occupational literature, including the planned "Reference Manual for Counselors," written information for students and the films presently available on a loan-free basis to high schools, hospital youth volunteer groups, Explorer Scouts, and others interested exploring health career opportunities.

"Project Together" is a statewide effort that will benefit Alabamians from all walks



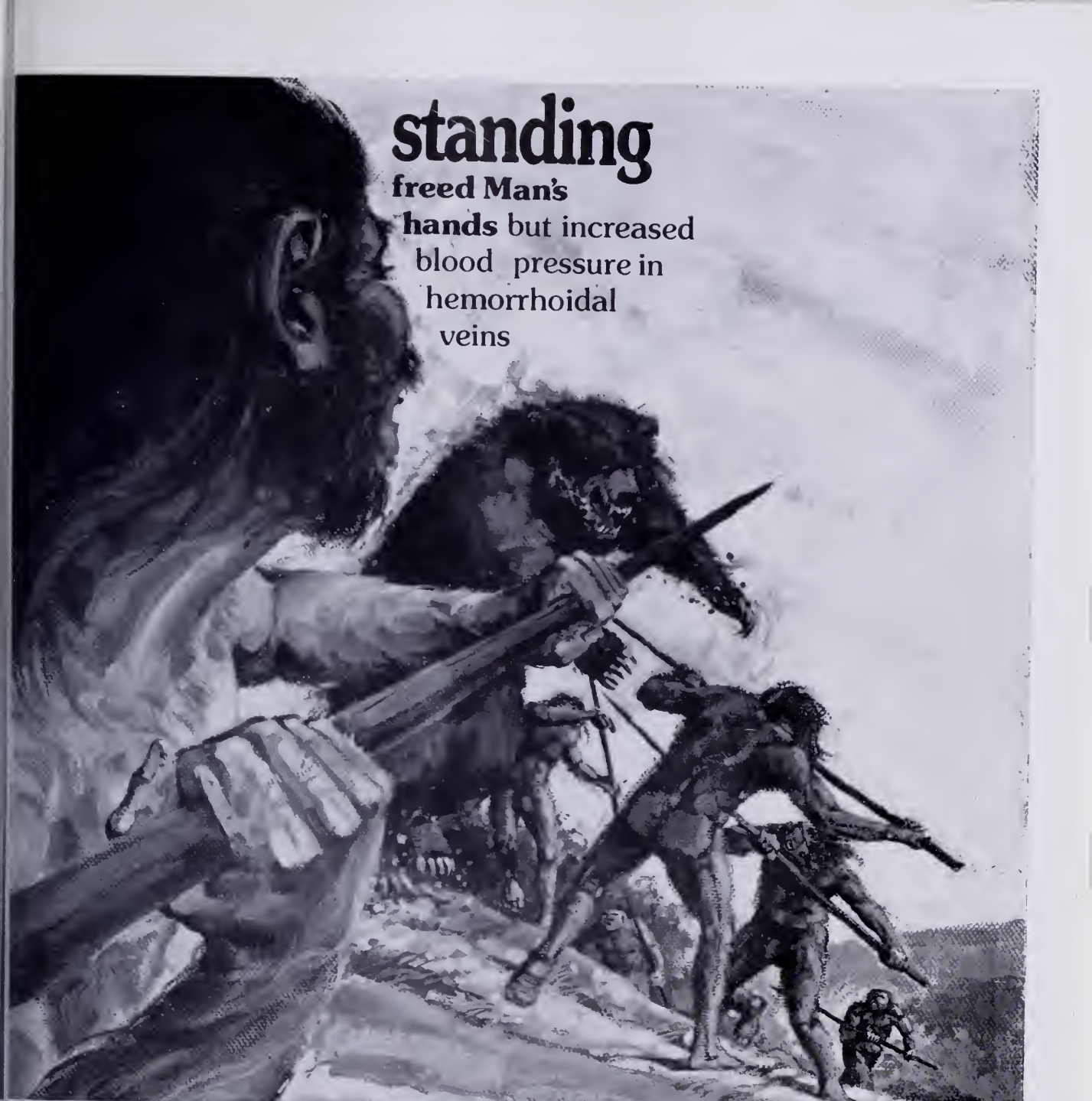
MRS. GRADY

of life. The project will be coordinated by Mrs. Chestley Yelton, State Health Careers Chairman of the Woman's Auxiliary to the Medical Association of the State of Alabama. Her address is 4004 Cahaba Road, Birmingham, Alabama, 35243, phone number 967-4261.

This project was approved by the State Board of Trustees of the Medical Association of the State of Alabama in February, 1973. I urge everyone to actively support this project as part of the Health Careers program.

Betty Grady

Betty Grady, President



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Quality Health Care Through Continuing Medical Education

The national accent at this time is upon a physician being able to document his efforts to maintain his ability to deliver quality health care. There are several outside influences attempting to legislate what they term, "quality assurance" requirements. However, these pressures from the private sector upon medicine have had a positive effect.

Organized medicine has responded by instituting the AMA's Physician's Recognition Award as evidence of the individual physician's acceptance of "the lifetime of learning" concept, which places a great deal of emphasis upon the practice of continuing one's medical education—an influence the American Academy of Family Physicians recognized from the beginning, and has used as a cornerstone of their Association since its inception.

Many physicians agree with the concept of continuing medical education, but find it difficult to allot the time to attend quality programs. Yet, they recognize the ever-increasing pressures to prove competency to the satisfaction of a third-party, by documenting attendance at continuing medical education exercises. The very essence of this situation was aptly described by Edward Siegel, M. D., in his presidential retirement speech before the Medical Society of New York, when he stated, "Probably the most insidious of all our problems is that of continuing education. . . . This may very well turn out to be the most serious of our problems in dealing with government. The spectre of relicensing keeps popping up here and there. . . ." Dr. Siegel appears to

be on the right track. Unless organized medicine provides the incentive to attend continuing education programs, there is a probability of the predicted and undesirable enactment of legislative "assurance of quality" requirements.

Many physicians do not take issue with the idea of required continuing medical education when it is a requirement conceived by physicians and their specialty societies or associations. It is the idea that their profession has been singled out by outsiders and selected as the group that needs governmental direction in order to function. It is the inference that their services haven't been of a high enough quality and that something must be done by non-physicians to insure that medicine remembers its responsibilities. It is the assumption on the part of a few, that physicians cannot regulate their own affairs without the aid of the guardians of the public. These are the concepts that physicians take exception to, and rightfully so. However, now is not the time to become embroiled in a no-win discussion about the merits of the above concepts. This is the time for the Medical Association of the State of Alabama to focus its attention on the positive aspects of this situation.

Efforts are being made within the Association to capitalize on recent developments. An Education Department has been created and staffed. The Medical Education Committee has responded with vigor and an added sense of responsibility to the tasks placed before it. Ad-Hoc Committees from

(Continued on Page 831)

THE CHALLENGE OF PAIN



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(Continued from Page 826)

within the committee are presently at work developing programs that have the potential to place Alabama in a new position in a nationwide comparison of medical association continuing medical education efforts—a position of being in the national vanguard.

An amendment to the Constitution indicative of a change in membership attitude is currently awaiting the required one-year interval. The amendment, if approved by the 1974 Annual Session, will place Alabama within the first ten states to require continuing medical education as a condition of membership.

Such a requirement need not be regarded in the same manner that many requirements are viewed. Instead of a hurdle to be overcome, it could become a source of pride for all Association members. It could become a declaration of professionalism serving to notify the citizens of Alabama that the Medical Association of the State of Alabama is duly concerned with the quality of health care within this State. It is a course of action toward a concern that the Association is prepared to responsibly face without pressures from outsiders and without legislation that forces submission—legislation that is filled with implications of organized medicine's incompetency, or lack of concern.

GUEST EDITORIAL

The Changing Role Of The Hospital In The Practice Of Medicine

In the distant past the hospital was of minor import in the practice of medicine. That has all changed, and a marked change it is. For, whether we like it or not, most medical care is now related to the hospital. The hospital has become the all-important workshop for the physician. Also it is the hospital, not the physician, that accounts for most of the rise in the cost of medical care.

There was a time when physicians controlled their hospital workshops. The medical boards of the individual hospitals were the all-important policy-making bodies. This was true in municipal institutions and in voluntary and private hospitals. The boards of trustees of the voluntary institutions did show intense interest, did guide and guard, and did otherwise make important contributions, and usually underwrote deficits. They rarely interfered with medical policy and medical decisions.

The function of the lay boards has changed, for the contribution they make to cover any deficits today is minimal indeed, when compared with the overall budget. In lieu of

philanthropy we now have the motivation of seeking to control and determine major policies in the hospital. With the advent of local community control, there is the additional feature of pressure groups, making particular demands and entering intensively into the decision-making process. Community interest adds a broader base to former philanthropic support of hospitals. There are many advantages in community interest, but there are some hazards too.

The income of most hospitals is now derived from other sources; from Medicare; Medicaid; grant support; from other government sources; from fees paid for care in the institution by full-time hospital-based physicians who are under contract, that is, employees of the hospital; and from charges for outpatient and emergency care. Such sources of funds carry nearly the total budget of hospitals. In the old days the direct concern of members of the lay board was considerable. This naturally followed from the fact that they were footing the bill for the needs of the patient and for any inefficiency and

inadequacy. This basis of interest has now been lost, somewhat at least. In lieu of such commendable concern, the search for individual or group power often has been substituted. Therein lies the great danger, for this may not parallel nor be identical with concern for patient care and patient welfare.

No one would object to active participation of the lay board and organized community groups, but bald power and control by laymen presents distinct dangers for the physician. Its particular danger lies in the loss of the physician's independence; this can seriously involve patient care by the physician. Independence is precious in any sphere of activity, but in medicine it is imperative. No physician, whether he be a general practitioner or a specialist, or whether he be working on the basis of fee-for-service or for a salary, part time or full time, can be worth his salt as a man or as a physician, nor can he carry out his function as a true physician, if he has lost his independence.

Our aim should be to control, if we cannot stop, the expansion of any arrangement by hospitals that denigrates the physician and transforms the physician into a paid employe. Ultimately such a dependent employe must pay heed not only to his peers, but also to administrators and "power-seeking" members of the lay and community boards.

We must be realistic, however, for we cannot turn the clock back to the prior era. The movement of so many recent graduates, and of physicians already in practice, to become full-time hospital-based employes has been with us for a long time. This policy is now so strongly established that it cannot be reversed without a complete revolution in medical care. The forces arrayed against such a reversal of what has become the established trend are too powerful to be overcome without a grim fight and direct confrontation; I fear that physicians may finally lose in such an encounter.

Recently there has been a decision in

California to the effect that the very commonly existing arrangement of full-time hospital-based physicians is illegal. The Committee on Hospital-Based Physicians of the Medical Society of the State of New York has urged that a similar legal test of the practice of medicine by hospitals be undertaken by the Council of the Society. Also several resolutions in the House of Delegates have requested that this be done, and even that special legal counsel be employed for this purpose. It may be worth noting that the victory in California does not imply that an identical decision will be obtained in New York State. What is most disturbing is that the victory may be a Pyrrhic and short-lived one, for the powerful opposition in this State would simply have the Legislature change the law specifically to their advantage, totally abrogating the significance of any such legal victory. What we seek is a permanent policy for a permanent solution which will be in our favor, not a temporary victory, soon to become meaningless.

As noted, whether an identical decision would occur in New York State is moot indeed. Also subterfuges and other arrangements would be made soon enough, which might well defeat the designed effect of a legal decision in our favor or its widespread application. There is also the question as to whether the attendant upheaval is worth the price for all concerned.

Can nothing at all be done? Are there not other avenues worthy of exploration? One approach that may salvage the independence of the true physician of old may be to spend our energy in acquiring our former due importance and the return of full control in the hospital proper. We must endeavor to restore the authority of medical boards in all ethical and medical decisions. Also physicians must extend themselves to participate actively in the social and economic aspects of medical care.

(Continued on Page 836)

Encounter under the Scanning Electron Microscope



SEM reveals changes in *E. coli* exposed to antibacterial agents

The Scanning Electron Microscope (SEM) is the only instrument which gives 3-dimensional views on a microscopic level. This permits the surface morphology of microorganisms to be observed in

detailed perspective. Changes in surface morphology of *E. coli* exposed to various antimicrobial agents are seen on the following page. An SEM photomicrograph of normal control *E. coli* appears above.



E. coli + sulfamethoxazole



E. coli + tetracycline



E. coli + cephalothin



E. coli + ampicillin

Different modes of antibacterial action — Similar changes in morphology

As part of a series of experiments,¹⁻³ strains of *E. coli* proven susceptible to each antibacterial agent were exposed to 1 MIC of the respective antibacterials for a three-hour period. Included were cell-wall-active drugs, ampicillin and cephalothin; a drug interfering with intracellular protein synthesis, tetracycline; and a chemical agent which acts by interference with para-aminobenzoic acid, sulfamethoxazole.

As seen above, elongation of the bacilli, mid-cell defects and spheroplast-like forms may be appreciated with the SEM technique. These changes in bacterial morphology were similar... regardless of the antibacterial agent used and irrespective of

its mechanism of action.

"At present, the significance of these observations in clinical infection must be considered with caution, but it is hoped that these data will stimulate a reevaluation of present concepts of the nature and role of morphological variants of bacteria exposed to a variety of antibacterial factors."²

It should be noted that no clinical conclusions can be drawn from this study, as it is not always possible to extrapolate *in vitro* data to humans.

References: 1. Klainer, A. S.; Fass, R. J., and Perkins, R. L.: Scientific Exhibit presented at the 25th American Medical Association Clinical Convention, New Orleans, La., Nov. 28-Dec. 1, 1971. 2. Klainer, A. S., and Perkins, R. L.: *Antimicrob. Agents Chemother.*, 1:164, 1972. 3. Klainer, A. S.: Data on file, Hoffmann-La Roche Inc., Nutley, N.J.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Acute, recurrent or chronic nonobstructed urinary tract infections (primarily pyelonephritis, pyelitis and cystitis) due to susceptible organisms. **Note:** Carefully coordinate *in vitro* sulfonamide sensitivity tests with bacteriologic and clinical response; add aminobenzoic acid to follow-up culture media. The increasing frequency of resistant organisms limits the usefulness of antibacterials including sulfonamides, especially in chronic or recurrent urinary tract infections. Measure sulfonamide blood levels as variations may occur; 20 mg/100 ml should be maximum total level.

Contraindications: Sulfonamide hypersensitivity; pregnancy at term and during nursing period; infants less than two months of age.

Warnings: Safety during pregnancy has not been estab-

lished. Sulfonamides should not be used for group A β hemolytic streptococcal infections and will not eradicate prevent sequelae (rheumatic fever, glomerulonephritis) of infections. Deaths from hypersensitivity reactions, agranulosis, aplastic anemia and other blood dyscrasias have been reported and early clinical signs (sore throat, fever, pallor, purpura or jaundice) may indicate serious blood disorders. Frequent and urinalysis with microscopic examination are recommended during sulfonamide therapy. Insufficient data on children under six with chronic renal disease.

Precautions: Use cautiously in patients with impaired renal or hepatic function, severe allergy, bronchial asthma; in glucose-6-phosphate dehydrogenase-deficient individuals in whom related hemolysis may occur. Maintain adequate fluid intake to prevent crystalluria and stone formation.

Adverse Reactions: Blood dyscrasias (agranulocytosis,

Encounter in Clinical Practice

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and sleeping hours—especially important during hours of sleep when normal urinary retention tends to favor bacterial proliferation.

Also effective in nonobstructed chronic and recurrent u.t.i.

It is not uncommon for the elderly and the debilitated to develop chronic and/or recurrent nonobstructed urinary tract infections such as pyelonephritis and cystitis. Such cases often re-

spond satisfactorily to Gantanol. The increasing frequency of resistant organisms is a limitation of usefulness of antibacterial agents including sulfonamides, especially in chronic or recurrent u.t.i.

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Either dosage form—the Tablets or the pleasant-tasting, cherry-flavored Suspension—can provide the dependable antibacterial activity necessary to control susceptible nonobstructed cystitis and pyelonephritis. Symptomatic improvement may usually be expected in 24 to 48 hours. The usual precautions with sulfonamide

therapy should be observed, including adequate fluid intake. Gantanol (sulfamethoxazole) is generally well tolerated with relative freedom from complications; the most common side effects are nausea, vomiting and diarrhea. Frequent c.b.c.'s and urinalyses with microscopic examination are recommended.

In nonobstructed cystitis and pyelonephritis due to susceptible organisms

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stic anemia, thrombocytopenia, leukopenia, hemolytic anemia, hypoprothrombinemia and methemoglobinemia); *cutaneous reactions* (erythema multiforme, skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctivitis and scleral injection, photosensitization, arthralgia and arthralgia); *gastrointestinal reactions* (nausea, emesis, abdominal pains, hepatitis, diarrhea, anorexia, pancreatitis and colitis); *CNS reactions* (headache, peripheral neuritis, depression, convulsions, ataxia, hallucinations, tinnitus, vertigo and insomnia); *miscellaneous reactions* (drug fever, chills, nephrosis with oliguria and anuria, periarteritis nodosa and phenol phenomenon). Due to certain chemical similarities with the goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of hypothyroidism, diuresis and hypoglycemia as well as thy-

roid malignancies in rats following long-term administration. Cross-sensitivity with these agents may exist.

Dosage: Systemic sulfonamides are contraindicated in infants under 2 months of age (except adjunctively with pyrimethamine in congenital toxoplasmosis).

Usual adult dosage: 2 Gm (4 tabs or teasp.) initially, then 1 Gm b.i.d. or t.i.d. depending on severity of infection.

Usual child's dosage: 0.5 Gm (1 tab or teasp.)/20 lbs of body weight initially, then 0.25 Gm/20 lbs b.i.d. Maximum dose should not exceed 75 mg/kg/24 hrs.

Supplied: Tablets, 0.5 Gm sulfamethoxazole; Suspension, 0.5 Gm sulfamethoxazole/teaspoonful.



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(Continued from Page 832)

This is a natural, logical, and legitimate interest, for no one is more involved in, nor has greater concern for, the care and welfare of the patient than the physician. He supersedes the administrator, the social worker, and the ancillary paramedical personnel of all kinds in this deep involvement with the patient.

That should be the cynosure of our efforts to become more than paid employes under the bidding of those who control the paychecks. Rather, in every hospital the physicians on the staff, paid full time, part time, or otherwise should unite to protect the prerogatives of all physicians and their relationships to each other, their patients, and the administration. No individual physician can achieve this. He may have that authority for a while, but sooner or later that position is altered, and he finds himself again only a cog in the machine. As always, "he who pays the piper calls the tune."

The individual physician is at a distinct disadvantage in any dealings with the individual hospital and its fully-empowered administrator. Physicians must act together as a group, and the medical board is the proper local negotiating unit for every member of the medical staff. The further joining together of many medical boards as a larger organization to act in concert can be a most effective instrument for the preservation of the independence of the individual physician and a strong force to maintain his general welfare. A current illustrative example of what can be done by such unified action at the level of the medical boards is seen in the recent important concessions obtained from the Health and Hospital Corporation of New York City by the unanimous action of the members of the Advisory Council, consisting of representatives of the medical boards of the municipal hospitals.

Mutual concern and united action, not union activity, are appropriate for the physician. This is distinct from union activity

in the ordinary sense, such as striking to attain objectives. Nor do we desire nor need the power from extraneous affiliations; there is always too high a price for the professional to pay for such sources of strength. Our strength does not lie in such ordinary weapons of industrial unions; rather, it is still to be found in the superior service to grateful patients. Devoted, loyal patients are our source of support, the phalanx for the protection of the needs and rights of the physician. It is this doctor-patient relationship which will help us to control our destiny.

This is an important problem and concerns all physicians; it is charged with emotion, as it should be. Much is at stake. Differences of opinion undoubtedly exist.

Reprinted from the February issue of the New York State Journal of Medicine.

Substitute Sight Systems

Blind persons in the United States and some foreign countries are trying out substitute sight systems, including one that transmits images through the skin. The latter consists of a half-ounce television camera mounted on spectacle frames and an array of electrodes placed against the skin of the abdomen. Although it is only "a crude beginning," said Dr. Carter C. Collins of the University of the Pacific, it enables a blind person to walk into a specially designed laboratory, locate a desired object and pick it up—all in about ten seconds. The other system allows the blind to read print without conversion to Braille. The reader guides a pocket-knife size camera over a page with one hand and puts his other hand on a screen full of vibrating pins. The camera notes the characteristics of each printed letter and the information is relayed to the reader via the pins and his sense of touch.

Enjoy yourself. These are the Good Old Days you'll miss in the 1980s.

In 1818, during the first session of the House of Representatives of the Territorial Assembly of Alabama, a Representative from Monroe County petitioned for legislation placing control of the medical profession in the hands of physicians.

BLUE CROSS-BLUE SHIELD OF ALABAMA



Video Cassette Libraries Help Doctors Keep Up To Date

One of the nation's largest libraries of video cassette programs is now available to help physicians, dentists and other health professionals keep up with new developments in their fields—at home, office or hospital.

The video cassettes, inserted in players (similar in concept to audio cassette players) which connect to standard color TV receivers, offer the health professional a variety of programs of current interest in such areas as surgery, internal medicine, dermatology, electrocardiology, obstetrics and gynecology, allergy and other specialties.

This video cassette library already contains materials from such institutions as the American Heart Association, Emory University School of Medicine, Baylor Medical Center, Mayo Clinic, American College of Surgeons, the Institute for Dermatologic Communication and Education, Ciba Pharmaceutical Co. and E. R. Squibb and Sons. Current negotiation activity is expected to bring the number of programs in the library to well over 300 during 1973.

Among the individual authorities represented in these programs throughout the United States and other countries are Alton Ochsner, M. D., Michael E. DeBakey, M. D., John H. Knowles, M. D. and Irvine H. Page, M. D.

"The increasing acceptance of the new video cassette technology now allows the doctor to use these programs at his own convenience", said Edward O'Rourke, M. D., M. P. H., vice president—health and medical education of New York-based Primary Medical Communications, Inc., a pioneer in

professional cassette learning systems. "He no longer needs to depend only on medical society meetings and conventions or university classrooms for his continuing education sources. He can use these cassette programs for his own individualized curriculum whenever it is most appropriate for him—without having to darken a room, set up a screen or thread a projector."

The same video cassette educational system may be used for staff training and orientation in hospitals and for patient education and counselling.

In addition to identifying, evaluating and distributing video cassette programs from existing libraries, Primary is also producing new programs to meet important new educational needs of the health care field. For example, two programs about the family physician's role in kidney dialysis and kidney transplants will be available soon.

"Both the selection of materials from existing libraries and original productions are under the guidance of a Medical Review Board comprised of outstanding medical authorities" Dr. O'Rourke said. This careful professional guidance insures the authenticity of all programs offered in the Primary video cassette system. "The assurance of professionalism is inherent for those who use the programs offered by Primary," according to Dr. O'Rourke.

Professional subscribers can obtain both the video player equipment and the programming on rental or purchasing basis. Special programming subscriptions are modestly priced.

I have but one lamp by which my feet are guided, and that is the lamp of experience. I know of no way of judging the future but by the past.

—Patrick Henry

The rung of a ladder was never meant to rest upon, but only to hold a man's foot long enough to enable him to put the other foot somewhat higher.

—Thomas Huxley



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The Current Scene—Professional Liability

The Medical Department
Employers Insurance of Wausau
Wausau, Wisconsin

Factors Outside of Medical Practice

Recently a girl fell on an allegedly defective sidewalk, cutting her head on a hydrant. A generation ago she might have recovered her out-of-pocket expenses, and perhaps a few hundred dollars for pain and suffering. This young girl asked, and was awarded \$260,570 for an ensuing "personality change." Everyone knows that court and jury awards—not just in professional liability, but for actions of every kind—reach new highs each year. In negligence liability actions, the increase isn't just in numbers of cases and amounts of recoveries, but in the different kinds of actions to which courts and case law are becoming more and more hospitable.

Because causes of action for professional liability are likely to be loose and fuzzy rather than defined and explicit, they are convenient vehicles for far-out allegations and ingenious new theories of direct and indirect injury. Doctor-defendants therefore suffer more from current trends, probably, than do other defendants. In measuring the effect upon the insurance rate-making process, one must remember that actual jury awards are only the tip of the iceberg. One well publicized recovery inflates the settlement value of every outstanding and future claim. A single award has a financial impact on a hundred defendants in lawsuits yet to be tried or settled. This factor is beyond the control of the physician.

The newspaper treatment of professional liability verdicts is another factor over which physicians have little control. The press can't reasonably be blamed for the fact that medical mistakes make salable news, while the day-to-day medical successes do not. The properly performed cholecystectomy will never make the newspaper unless the patient

is the President, but a failure is news if the patient decides to make it so by bringing suit. What is even worse is that these claims are at once sensational and at the same time complex, and the reporter emphasizes the sensational while ignoring the complexities. Natural as this may be, its unfortunate result is to impair the credibility of doctor-defendants and their medical witnesses in the eyes of the public from which juries are drawn.

These factors are characterized as beyond the practical control of the physician. This is not to say that these areas, the inflated jury awards and uninformed coverage in the papers, are not completely beyond redemption. They'll respond, like all human foibles, to education. But physicians as individuals can do little to hasten that process, and should concentrate attention on issues more directly before them.

Within The Physician's Control

It is not the intent of this article to instruct physicians in the practice of medicine. However, from the vantage point of seeing claims and suits in quantity, patterns or trends of claim activity emerge. Here is a quick review of some areas which from the quantity viewpoint are known to be within the practical control of physicians.

The Careless Comment

A great many professional liability claims originate in careless comments or rash criticism concerning the treatment given by another physician. The chances of this happening have been greatly multiplied by the move into the age of specialization. It is more than likely that today's patient will be seen by two to six physicians per illness or accident. Each specialist evaluates the

work done by his predecessors on the case before forming his own opinion.

A careless comment or rash criticism at this point can be "the start of something big." It has been estimated that 65 to as high as 85 per cent of all claims have been triggered in just such a way.

There is and should be legitimate criticism; there is a time and place for it. If another physician's work needs to be judged, let it be done in a recognized legal or medical body or in face-to-face confrontation. Improved patient care should be the basis for that criticism.

Fee Collections

How many legal actions are triggered by patient resentment of a physician's fee or by the sheer inability to pay it, especially if the results of treatment have been less than desired? Nobody knows, but it is no coincidence that investigations frequently disclose histories of arguments about fees which antedate the decision to make a claim or that malpractice suits follow quickly on the heels of legal actions to collect fees.

Even the apparently simple and straightforward procedures for getting out statements and collecting overdue accounts are worth more thought than many doctors seem to give them. Take the trouble to ask a few non-medical friends, they will probably reveal that the least tactful letters they have ever seen, emanate from some of the collection agencies to which physicians often entrust this chore. The agency works on percentage. Its sole concern is to collect the outstanding bill, cut its slice off the top, and close its file. It has no concern for the community image of the doctor-client. There was a case recently where the collection of a six dollar fee triggered a lawsuit which cost several thousand dollars to defend.

—Have an advance understanding with patients of the fee to be charged, what it covers and what it does not cover.

—Invite patients who have not paid with-

in a reasonable time to come in and discuss their accounts.

—Use discretion in efforts to collect from dissatisfied patients or in cases where there have been unexpected complications or poor results.

—The threat of a countersuit should not be the determining factor in the decision to press for payment or not. However, keep in mind the statutes of limitations concerning contracts and professional liability.

Consultation

From our viewpoint, consultation brings two significant problems into focus; the recommendation to seek consultation and the consultant-patient relationship.

In recommending consultation to a patient, a physician is usually faced with one of two situations: the patient's condition, disease or injury is beyond the qualifications or expertise of the attending physician; or there hasn't been the improvement expected with the selected course of treatment. The decision to recommend consultation is not to be taken lightly, and once made it deserves assertive action on the part of the attending physician.

—Explain carefully to the patient and/or his family why and what consultation is necessary and how it can be obtained.

—Make compliance with the medical advice a condition of continued care.

—Offer assistance in the selection of and arrangements for consultation.

—If the patient doesn't follow the advice, re-emphasize the need in a letter with a copy retained for your files.

—Document in the patient's record all efforts to provide good medical care.

It is no coincidence that more professional liability claims, both justified and unjustified, are brought against physicians who are new and unfamiliar to the patient, than

(Continued on Page 849)

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Beyond The Fringe: The New Imperatives

Charles A. Hoffman, M. D.

President

American Medical Association

Ladies and Gentlemen, Honored Guests. It is a pleasure to join you today and to bring you best wishes from the American Medical Association. I consider it a privilege to be the first AMA President invited to present the Jerome Cochran Lecture.

Dr. Cochran can truly be called the Father Of Medicine in Alabama. He wrote the constitution for this State Medical Association when it was founded in 1873. He served as chairman and a member of your Board of Censors for more than 20 years, (From 1873 until his death in 1896). His contributions to this Medical Association and to the better health of the citizens of Alabama are indeed worthy of commemoration.

Dr. Cochran lived when American medicine was still in its infancy, of course. But even then profound changes were in the making which would shift the emphasis of medicine to science and technology. In 1910, just 14 years after Dr. Cochran's death, the famous Flexner Report was published and the crusade for quality in medicine gained momentum. The second-rate diploma mills of the time were gradually eliminated and medical education in America began its climb to the worldwide peak of excellence it occupies today. And the revolution in medical science and technology swiftly accelerated,

especially after World War Two. This revolution allowed us to make more medical progress in three decades than in all the previous centuries combined.

If Dr. Cochran were alive today, he would surely be dazzled by the marvelous medical and surgical techniques in our medical armamentarium. He would be delighted by our modern medical schools, and by our community hospitals and clinics where the wonders of modern medicine are performed. He would be awed by the depth of knowledge and the skills of any one of thousands of physician-specialists with whom he could consult. He would undoubtedly approve of the voluntary health insurance system which has made it possible for more Americans to secure more medical care of higher quality than ever before in history.

But Dr. Cochran would be *perplexed* by the nationwide health care controversy which exists in the midst of all this medical plenty. He would be confused because in the heat of controversy—opinions tend to polarize around cliches, and the health care debate is no exception.

The public says that good health is a basic right, and wonders why there is not a medical miracle to cope with every untoward symptom, whether real or imagined. Government Health Care Planners waving statistics of dubious authenticity, claim there is a health care crisis in America, and that the

Dr. Hoffman presented the Jerome Cochran Lecture at the 112th Annual Session of the Medical Association of the State of Alabama on April 13, 1973, in Mobile, Alabama.

delivery system must be melted down and recast in the "Made in Washington" mold. And some physicians, stung by criticism, harried by heavy patient loads, and besieged by the need for continuing medical education say the federation of county and state medical associations and the AMA is not doing enough to protect their practices.

The AMA is out-of-date, they say, and unresponsive to their needs. Even worse, they infer that the AMA is selling them out by introducing a National Health Insurance Program such as Medcredit, and by urging cooperation with the Federal government in projects such as PSRO.

In this atmosphere of confusion, criticism, charge and counter-charge, how do we separate fact from fiction? What *are* the proper roles of the public, the government, and the medical profession in resolving today's health care problems? What *are* the responsibilities of the individual physician to his patients, to his profession and to the public? And what are the *new imperatives* that our medical federation must meet in order to preserve the strength and vitality of our profession for tomorrow?

Let's take the diagnostic objectivity that we employ as clinicians and apply it to a discussion of possible answers to these questions.

The fact that a health care controversy exists is inevitable since all progress involves paradox. This paradox has been described in a study by the Brookings Institution which says, "All creative achievement is disruptive. Every partial solution promptly explodes open a new set of problems. The increasing application of science and technology means more frequent dislocations and more violent contradictions.

"It is ironic, but should not be surprising, that widespread criticism of the medical profession and medical care institutions should develop precisely at the time when such care is better and more accessible than ever before."

One major cause of the current health care controversy is that the public and the government fail to understand the difference between *good health* and *good medicine*. Americans have a right to good medical care—but they do not have a right to good health. Good health is *not* a right but a *responsibility*—a *shared* responsibility—and that responsibility begins with the *individual's* own health behavior. The failure of most Americans to observe good health behavior has led to what might be called an acute case of "personal pollution" in this country. And the results are obvious. Poor personal health behavior is a significant causative factor in heart disease, cancer, stroke and accidents—the four leading killers in America today.

Improved health behavior on the part of the average American could be more effective in raising general health levels than a hundred thousand new physicians or five thousand new hospitals. So the public's role in improving health should be to adopt personal health practices which *minimize*, rather than *maximize*, the onset of disease and death. We can *not* reasonably expect *perfect* health behavior, of course. But we can insist that the human *body* should be a status symbol worthy of at *least* as much attention as the family *car*.

The mistaken belief that good medicine and good health are synonymous results in another serious complication. The public and the government, believing that good health is something that physicians provide and patients consume, look at health as a commodity that can be purchased in dollar amounts. This leads to the equally false conclusion that the so-called "health care crisis" in America can be solved simply by changing the fiscal priorities in the medical care delivery system.

The Brookings Institution Study I mentioned earlier warned of the danger of this kind of thinking, "The problems of medical care are clearly an interrelated complex. Methods of payment and organization are

interactive. Both are shaped by basic determinants such as the progress of science and medical technology—the prevailing ideal-image of the doctor-patient relationship—and surrounding economic circumstances. “Proposals to improve the distribution of medical services solely through additional funds—without regard to the conditions of supply or the special characteristics of medical demand—may well lead to self-defeating inflation.” This is exactly what happened in 1965 and 1966 with the Medicare and Medicaid Programs, which are basically financing mechanisms. As Harry Schwartz of the NEW YORK TIMES, author of the book, “THE CASE FOR AMERICAN MEDICINE,” has pointed out, Medicare and Medicaid unleashed billions of dollars of additional purchasing power on the health-care market without Congress doing anything to increase the resources—doctors and the like—to take care of demand. These programs did help provide the elderly and the poor with additional financial access to medical care, of course. But they also resulted in the “self-defeating inflation” referred to in the Brookings Study, and in the needless red tape and bureaucracy of government programs in general.

Somehow Congress seems to have fore-sworn our democratic philosophy . . . and attempted to become the *engineer*, rather than the *architect*, of our society. The Brookings Institution has pointed out that the big mistake of the Federal government during the 1960's was in approaching every social problem with another Federal program backed up with a sackful of Tax funds.

As Elliot L. Richardson, former HEW Secretary, has said, the results are, “—Giant public housing developments that have become high-rise slums and breeders of delinquency, drug addiction and crime. “—Scenery-destroying super highways that bog down with traffic jams . . . “—And worst of all, a disgraceful welfare system with incentives not to work and for fathers to desert their families.”

The critical question in America is whether medicine will become what Mr. Richardson calls another “Monument to the folly of certain expenditures.” A compulsory National Health Insurance System such as that proposed by Senator Kennedy can only erode private initiative and action, and slow medical progress to a bureaucratic crawl. Happily, there is a rising tide of disenchantment against the kind of free-wheeling government programs represented by the Kennedy-Griffiths Bill. President Nixon himself has become the foremost exponent for putting firm reins on galloping government.

The role of the Government clearly must be to *stimulate*, not erode, and to *assist*, not supplant, responsibility of the private sector in resolving social problems—including health care problems. At the same time, however, our profession must act as a *builder* and not simply an *opposer*. The big mistake of our profession in the past is that we did not propose really viable alternatives to programs such as Medicare. And because we had no alternatives, our credit with the public and with Congress dropped to near zero. We somehow became cast in the role of opposer, rather than builder. The reason is that we have become too preoccupied with the science of medicine. The Brookings Institution has stated that medical technology has become our master as well as our servant,

“More science and more knowledge mean increasing specialization, which in turn brings a subdivision of labor and interdependence of personnel. “Complex mechanical equipment means dependence on paramedical personnel, as well as institutional arrangements for the feasible economic use of such equipment. “Today it is no longer possible for a single physician to deliver a total medical product. Medical practice is inescapably an organizational process.” This organizational process also tends to produce some physicians who have *deep*, but *narrow*, convictions, according to Dr. DeWitt Stetten

Jr., Director of the National Institute of General Medical Sciences. Dr. Stetten says that, "Law, Government, Economics and Philosophy—those areas of culture not closely associated hitherto with the practice of medicine, have been permitted to go by the Board, ". . . And once this has happened, later reinvolvement with such matters is difficult and unlikely." Yet the truth is, Gentlemen, that for the foreseeable future, medical problems will be fought by dealing with economics and politics and philosophy and by fighting the deficiencies of society itself.

All of these problem areas are *beyond the fringe* of traditional medicine, yet we must learn to exert leadership in dealing with them. We can no longer afford any physicians who have deep, but narrow, interests. There is no room for the physician who buries himself in his practice and says, "*This is medicine.*" While the individual physician's first responsibility must be to his patients and his practice, he must also recognize his responsibilities to his *profession* and to the *public*. Because it will be the larger profession, and especially our *organized* medical federation, which will play a major role in resolving those problems which lie outside purely therapeutic medicine. We must learn to be as effective in assuring *access* to care and in moderating the *costs* of care as we have been in improving the *quality* of care. To maintain leadership, and thus a degree of professional control in these areas will require forceful action, rather than negative reaction.

It is significant that we have retained the responsibility for medical education because we *voluntarily acted* to improve standards. And without the voluntary enforcement of self-regulation, the growth of medical specialties would not have been possible. The reason medical experts the world over agree that the quality of American medicine is the finest anywhere is not because we *say* it is so, but because we played the major role in *making* it so. It follows that the best chance

to minimize government control of mechanisms to moderate costs and increase access to care is to act as *builders* of our own programs, rather than *opposers* of someone else's proposal. The purpose of the AMA's Mediscredit Program, in fact, is just that. It would help provide access to care for all Americans, including those in need, and protect everyone against the high costs of catastrophic illness. But the *degree* of government subsidization would be directly proportional to actual financial *need*. Our private, pluralistic medical care system would maintain a major share of control over delivery.

Our position is the same on PSRO's, or Professional Standards Review Organizations. A bill introduced in the last Congress would have given the government virtually complete control over Medicare and Medicaid. We were *not* successful in preventing passage of the bill, but we *were* successful in getting the bill amended. The modified law now gives state and local medical societies the first opportunity to set up PSRO's. This keeps responsibility for Peer Review where it belongs, with our profession. Only physicians are capable of evaluating the work of other physicians. But the point is that we must *take* the opportunity, *seize* the initiative, for PSRO's, or someone *else* will.

We must react *creatively* to the health care problems of our times and *plan* and *propose* our *own* formulas for change. Acting as physicians—we must meet the needs of our patients. Acting together—as a united profession—we must work with the public, and with government, in solving problems beyond the fringe of traditional medicine. Only in this way will medicine as we know it be able to survive. As the Brookings Study says, "There is a growing and articulate body of leaders in the health professions who have not only accepted the passing of old forms of organization, but who recognize the importance of making wise choices among the available alternatives of the future.

"We cannot know whether the medical

care patterns of the future will excell ours. We do know that they will be different. They can and should be better in view of continuing scientific and economic progress. "If they are, however, it will *not* be an automatic development, but because those who

have a concern and a stake in medical care take the trouble to understand the great historical forces involved, and deliberately seek to adapt themselves—and their institutions—to the new imperatives." To that, Gentlemen, I can only add "Amen."

(Continued from Page 843)

against those whom the patient has known and trusted for a long time. The confidence and trust which make up a patient-physician relationship are the critical factors. They do not develop overnight.

Since the consultant usually doesn't have time to develop this bond, he would find it to his advantage to trade on the relationship already established. For the benefit of all concerned, the consultant should work as closely as possible with the attending physician; keep him informed; keep him in the picture.

Records

The importance of good patient records is increasing daily. The importance in professional liability is not that they are instigators or triggers for malpractice actions, but rather because of the role they play in the physician's defense of such an action.

They serve as a yard stick in the measurement of the caliber of medical care. Too many physicians have had to rely on juries believing the veracity of their statements based on recollection. When faced with these physicians and the patients they have cared for, juries have a tendency to accept the patient whose alleged injuries are far more visible than the physician's records.

Patient records must contain significant entries of all you do for the patient. These notations should be part of the record no matter how or where they evolved—office, home or telephone.

Consent

Although of recent vintage, the concept of

"informed consent" as an allegation in a malpractice suit is gaining in popularity. It has almost become "if all else fails, try informed consent" type of allegation, and it has been a highly successful one.

Traditionally, the physician evaluated the patient, his symptoms and clinical findings; made a diagnosis; selected a course of treatment and told the patient of the diagnosis and necessary treatment. The patient, depending on many factors—one of which was the trust and confidence he had in the physician, either accepted or rejected the treatment. If something unexpected happened such as the development of a fistula or paralysis, the patient more than likely accepted the physician's explanation of why it happened.

In this age of specialization with the consequential weakening of the bond of trust, the telling of the patient of the diagnosis and selected treatment is no longer sufficient. The physician must explain, *in language understood by the patient*, the nature of the illness or condition, the nature of selected treatment and the alternatives, the probability of success, the possibility of undesired results, and the risks and hazards. In addition, the physician must take steps that will enable him to prove at some future date that this explanation was given to the patient and/or his family.

Admittedly, this is not an easy task. It places the physician in an unenviable position of having to give each patient sufficient information in a digestible form yet not too much information as to frighten the patient away from necessary treatment.

Immunologic Interpretation Of Psychologic And Psychiatric Therapies

Wallace Marshall, M. D.*

Montgomery, Alabama

Various modern therapeutic modalities used for psychologic and psychiatric therapy may seem unrelated. The purpose of this paper is to demonstrate that these various therapeutic methods possess common bonds.

A viable and uncomplicated basic theory might assist decidedly to explain the etiologic aspects which have to do with these various therapies. Hence, a brief review of the immunologic approach will be presented which may explain normal as well as abnormal behavior.

If we recall it correctly, the "association of ideas" theory was first mentioned in Plato's *The Republic*. About 200 years ago an English physician, Dr. David Hartley, (1705-57), introduced a rather remarkable concept that sensory stimuli reach the human brain by means of tiny vibrations which he termed "vibruncules." It is known that Sir Isaac Newton (1704) wrote along similar lines. Both authors mentioned the "association of ideas" theory¹ which was concerned with thinking, reasoning, and remembering—all contributed markedly to early psychological theory.

Dr. David Hartley had a famed student named Joseph Priestley (1733-1804) who received a Doctorate of Laws degree from the University of Edinburgh. Dr. Priestley not only gained lasting fame through his discovery of oxygen, but he also identified a large group of other gases not yet known. He wrote a volume on Dr. Hartley's "association of ideas"² and some of his data was mentioned in a paper published by the current author³.

Then came James Mill (1773-1836) fol-

lowed by his brilliant son, John Stuart Mill (1806-1872), who, with some of his brilliant and famed colleagues, further expounded Dr. Hartley's theory on the "association of ideas"⁴.

However, these psychological teachings lost their importance with the passage of time. Now they are mentioned mostly by philosophers in reviewing the history which deals with that field.

Doctors Hartley and Priestley advocated that the incoming (afferent) stimuli encoded the human cerebrum, although during their times the nature of neural impulses was not known. As Dr. Priestley wrote, the newborn brain is similar to a blank sheet of white paper. But as the effects of sensations infringe upon the brain, the results from afferent sensations are received in the brain, retained (memory) and employed to create ideas of association, whenever similar neural impulses are received by the brain. This was a decided forward step for our modern knowledge relating to cerebration.

Over 200 years passed before one of us discovered Hartley and Priestley's psychologic teachings. It was quite by accident that this writer purchased Hartley's volume in a dusty second hand book shop in Chicago, which apparently supports Solomon's observation that "there is nothing new under the sun."

Basis for Immunologic Theory

What follows is a synopsis for the immunologic approach to behavior. As Hartley and Priestley stated, the effects from sensory perception, via the touch, smell, taste, visual and the auditory tracts, are encoded or recorded in the recipient and cerebral centers.

*Dr. Marshall is Adjunct Professor of Psychology, Auburn University at Montgomery.

There they are stored as memory because of resultant neuroelectro-chemical changes in the cerebral cells. Hartley and Priestley spoke of these memory traces as ideas which are associated with further incoming afferent impulses of similar nature. Here the phenomenon of recall takes place, for the individual recalls the previous sensitizing effects through the receipt of similar or related afferent stimuli.

However, we term these incoming afferent stimuli as psychoallergens or better still, psychoimmunogens, which can sensitize the recipient cortical centers. This really serves as the basis for learning since these encoded brain areas contain added brain potentials which can be released through one's volition. This constitutes memory and its resultant recall. This process is also important for one's intellectual creativity, as Arthur Koestler has written⁵.

The introduction of psychoimmunogens follows the more or less law, because their dosage strengths, the nature of the afferent tracts involved, the time factor, and whether or not previous related psychoimmunogens have encoded the cerebral cells, all play important roles in the imprinting of these cortical cells from environmental sources through the individual's afferent neural tracts.

There appears to be additional important factors which will tend to sensitize or even hypersensitize these recipient cortical cells. Whether all this results in *pain inducing* or *pleasure inducing* stimuli seems highly important. If such stimuli tend to produce pain, their effects tend to be more marked on the cerebral encoding process, and hypersensitization of such cerebral areas may well ensue. This appears to be quite similar to the Hullian concept which involves overlearning. The possibility of frustration can become associated with such a process, and the individual will either run (regression) or fight (aggression) according to this well-known Darwinian concept.

These cortical encoded areas (containing

information) can be considered as not alone being sensitized or even hypersensitized, but they contain electrical potentials which are not present until after the cerebral imprinting occurs. So these electrically involved cortical areas act similar to tiny Leyden jars, since they store these electric potentials which result from cerebral encoding from afferent stimuli. After further excessive sensitizations of a particular nature become stored, the cerebral area's maximal ability to hold such potentials may spill over (surmenage) via the Papez-MacLean circuitry to the septal, thalamic and the hypothalamic areas which also tend to become hypersensitized. If such a process is continued without abatement, then the target organs of the body may become involved to produce psychosomatic difficulties⁶ through the autonomic nervous system which then sensitizes or even hypersensitizes these affected organs (i.e. various gastric upsets, bronchospasms, certain cutaneous changes, as with the neurodermatoses).

See chart on Page 898

Psychologic and Psychiatric Therapies

An entire comprehensive volume could be written on this topic. Due to the paucity of available space, only a cursory review can be made. However, it is important to remember that psychologic and psychiatric therapies are based on the fundamental theory that pain can be produced by frustrations of various types. These frustrations have been reviewed by one of us⁷, and usually were caused by painful experiences, many of which tend to become supposedly suppressed in the Freudian subconscious. We cannot subscribe to this point, since the so-called subconscious is only a philosophical entity used to explain the inability of a patient's recall process. Prolonged associative techniques are used to free these temporarily suppressed thoughts with the use of various techniques including psychoanalysis. According to the immunologic theory, these repressed bits of information are released with the use of desensitizing procedures.

These involve the introduction of infinitesimal amounts of related psychoimmunogens which tend to build up the patient's ability to cope with his hypersensitized state, similarly to the allergist's treatment of disorders which had previously hypersensitized patients to noxious substances, such as pollens, rusts, molds, smuts, etc. These allergic substances are gradually introduced until the allergic patient does not react chemically to them. The psychoanalyst gradually increases the dosage of initiating concepts which had produced the patient's withdrawal from noxious psychic stimuli. These regressive states become less painful as such therapy proceeds. However, if these painful psychoimmunogens are introduced too rapidly or in too strong doses, the patient may relapse into a markedly depressed state (withdrawal from reality-regression) and may even commit suicide, which can be considered as the ultimate stage of complete frustration.

The time honored Wier-Mitchell Therapy for psychiatric disorders was simple and to the point. This therapist merely removed the hypersensitized mental patient from his irritating and pain producing environment by placing him in the new and pleasant environment until the patient rested sufficiently to return to his former painful ecosphere. This form of therapy was similar to putting a hypersensitized patient to ragweed out of a ragweed patch into a new environment free from such irritating pollen antigens. The patient took a boat ride where ragweed was not present or the patient travelled to a Canadian area free from these irritating pollens until frost killed the pollen bearing plants in his home area.

Pearson⁸ wrote:

Sometimes the therapist takes a treatment leaf from the practice of the allergist, who may desensitize patients by injecting small doses of the pollen or other offending material. The therapist may practice psychological desensitiza-

tion . . . Before the therapist attempts psychological desensitization, he should have good understanding of the nature of the underlying conflict and of the personality of the patient. Furthermore, he should note carefully the reaction, and increase or decrease desensitizing dose accordingly . . . To desensitize successfully, the therapist must have and give out confidence. Uncertainty is contagious and fatal. Here again, the therapist is the strong, dependable father from whom stability and emotional security are derived.

Pearson did not explain how sensitization and hypersensitization occurred. Others recently have jumped on the bandwagon with their therapeutic use of desensitization. For example, Wolpe employs similar desensitizing procedures which he has termed reciprocal inhibition. Small amount of afferent stimuli, associated with the patient's hypersensitivities, are introduced until the patient doesn't respond abnormally. For instance, a child afraid of snakes is very slowly brought in small increments, to a pet boa constrictor, until he is able to pet the serpent. This is psychologic desensitization which one of us discussed before the American Psychological Association's Annual meeting at Ohio State University, circa 1938. In other words, the therapist attempts to substitute pleasurable for erstwhile painful stimuli, which were caused many times by multiple frustrations.

Due to the years psychoanalysis may take, many Neo-Freudianists have attempted to streamline this procedure, since the original method also is usually exceedingly expensive. The main proponent for this newer procedure was Franz Alexander⁹. These therapies are methods for relieving these explosive psychic (neuroelectro-chemical) potentials by allowing the patient to decompress himself by "talking out" these problems. Thus, the pressures created by these excessive sensitizations or hypersensitizations are allowed to become dissipated. This is usually accomplished in a quiet atmosphere free from

additional pain-producing psychoimmunogens so that homeostasis can occur.

Milieu therapy appears to serve the same purpose of placing the emotionally disturbed patient in a more pleasant surrounding where he can be protected against further painful stimuli. One might consider this form of therapy as being a take-off from the time honored Wier-Mitchell therapy where the patient is entirely removed from the noxious environmental stimuli which have caused him much pain. Obviously, one cannot remain indefinitely in such artificial and more or less pleasurable surroundings, because there always comes the time when the patient must return to his erstwhile environment with its pain producing tendencies. However, the rest periods obtained by these above therapies will allow him to establish homeostatic reactions which will tend to bolster his innate defense mechanisms. In other words, the passage of time, plus his desensitization (being free from further pain producing stimuli) will help the person's healing processes similar to going away on a vacation to avoid the continuation of being affected by further pain producing stimuli from the patient's particular painful ecosystem.

Behavior Therapy

Watson, during the 20's, was possibly the best known advocate for the behavioral system, although presently there are variations of this technique of therapy. Krech states that this treatment is based on conditioning. Whenever an undesirable symptom occurs in a patient, a painful stimulus is applied to bring the symptom under control through relaxation and desensitization procedures. Here again, the results from previous frustrations produce painful situations in patients. Desensitization is attempted by employing similar pain producing stimuli in small amounts until the patient can cope with the situation. We fail to comprehend why such therapy is termed conditioning, since the procedure really resembles the

same technique used in desensitizing patients who have become hypersensitized to allergens or immunogens.

The same argument applies to the so-called client-centered therapy. With this treatment, the therapist desensitizes the patient to whatever problems the patient has produced through what he has said or how he acts. The patient does not know why he shows abnormal behavior, and it becomes the therapist's task to explain to the patient the reasons behind such behavior so that the patient will comprehend finally the causes for his difficulties. Again, we can consider this type of therapy as a form of desensitization. In other words, the therapist attempts to rid the patient of his untoward effects which have resulted from pain inducing stimuli.

Learning Theories

These therapies use various learning theories for psychotherapy¹⁰. The basis for such therapy makes sense because some abnormal forms of learning must have occurred which produced painful episodes in these patients. As was mentioned, frustrations can occur from learning episodes as pain producing stimuli are conveyed to and encoded in the individual's cerebral cortex and his subcortical centers. These painful experiences result usually from conflicts involving social learning. In other words, these painful episodes originate from a pain producing ecosystem. Pain cannot result from ecosystems which are pleasurable to an individual. It is important to remember that people certainly form major parts of one's ecosystem unless he happens to live alone on an isolated island. The obvious approach to this type of psychotherapy is for the therapist to substitute non-painful procedures for treating a pain-scarred patient. Physicians use this basic procedure when they treat a pain-racked patient with medications which alleviate pain. As the therapist allows his patient to discuss his problems, desensitization may slowly take place, so that finally the pa-

tient gains sufficient insight into his erst-while problems so that discussions of these former painful episodes do not bother him enough to upset his equilibrium.

Obviously, re-educative therapy attempts to substitute pleasurable stimuli and attempts to have the patient avoid further pain producing stimuli. Also, such therapy substitutes normally functioning neural tracts and their cerebral encoding centers to replace defective neural counter parts. A well known example was the case of Helen Keller who was born without the use of her auditory and optic tracts which were deficient. Her remaining functional olfactory, gustatory and neural tracts which involved the sense of touch were employed to introduce information derived from her environment which became encoded in her recipient cortical centers.

The Desensitization Therapy of a Puppy

Years ago, when the performance of house calls was commonplace by physicians, I made house calls on one particular family, not alone to treat the ill children in this one family, but mainly to play with their beautiful cocker spaniel puppy, who showed his affection by voiding on my shoes and pants.

This family lived next to a school. The school children would abuse the puppy by throwing stones and hitting him with sticks. In a short time this puppy, by the name of Frisky, became quite hostile (hypersensitized) since he snapped and growled at his tormenters. Finally, the family was forced to get rid of this unfortunate dog. They asked if I wanted Frisky and I accepted him with much fervor. However, no one could go near his cage because he continued to snarl even when I tried to feed him. The pup had to be taught to play.

After a time, with love and affection, he allowed me to hand him food. He was allowed in our home and he immediately took over my favorite arm chair as his private property. He would glare at us, but it wasn't

too long before our affection for Frisky began to show dividends. He continued to snarl whenever anyone approached him with a stick. He became gentle and affectionate and remained so until his death which was due to a heart attack during a particularly hot summer day ten years later.

The Darwinian concept of fight or run had been demonstrated amply. Excessive painful incidents (with frustration) will inevitably produce such behavior in beasts and man. Remove the painful stimuli and recovery slowly can take place. Such appears to be the basis for most forms of psychotherapy.

Various Group Therapies

These methods evolved because of economic and time saving reasons. Groups of patients are treated collectively rather than singly. Also, group therapy, some believe, are more life-like and real than is individual therapy. We doubt if this form of treatment is superior to the older method with individual therapy because there may be a multiplication of personality clashes which may aid to present conflicts rather than deplete them. The basis for adequate psychotherapy should be the lessening of painful sensitizations of patients. Obviously, this cannot be controlled adequately when multiple patients become involved.

There are many forms of group therapy such as encounter groups, T-groups, sensitivity groups, etc. Some investigations of these therapies differ in their ideas concerning group therapy, where the patient's loneliness is supposedly lost with group activity. However, further psychic damage (due to further painful incidents) might easily do more damage than good.

Family Therapy

This therapeutic procedure of treating the patient's family makes much sense. When the patient (who has been psychically injured) returns to his family life, the mem-

bers of the family attempt to at least understand the patient's problems and try to avoid further pain producing conflicts. This is all well and good when the family members cooperate. But when the opposite occurs, then the patient finds himself in his previous painful environment and his trouble may return.

Psychodrama

Here the patient "acts out" his psychic difficulties, thereby allowing himself to become desensitized to some degree. This procedure is not a complete panacea in itself, although it allows him to see himself as others might view him. Certainly more data on this form of therapy is needed.

Play Therapy

This method is employed with children who find the therapist to be a kindly person who tends to protect them from additional pain.

Other Types

Some of these are a bit far-fetched such as those groups who hold hands, practice nudism and what have you! They do not appear to be worthy of further consideration presently. They seem to dote on the false idea that the world and the people in it were made for love. How silly can one get?

Psychiatric Therapies

Many forms of psychiatric therapy have come and gone. Among these were Metrezol, insulin, histamine (introduced by the author), which were various forms of shock therapy. A similar type of therapy is electroshock (E. C. T.) which is employed currently and mainly for deep depressions.

Psychosurgery, especially lobotomy, was made popular by Freeman and Watts, in the '40's. Presently, newer approaches to brain surgery, mainly to control patient hostilities, has been in the news. For a provocative review of this topic, see Holden's review¹², in which various surgical tech-

niques are used to attack various parts of the limbic system. These are forms of so-called psychosurgery which are employed to change behavior resulting from those changes in the thought and emotion producing centers. Some critics claim that such psychosurgical procedures constitute threats to the future social control of certain low economy groups in the country.

Some forms of stereotactic psychosurgery introduce electrodes into the diseased portions of brains. The electrical current destroys these areas thereby altering certain forms of violent behavior. Some of these newer surgical approaches are thalamotomy, cingulumotomy and amygdalotomy, depending upon the exact subcortical nuclei which are attacked. At best, these forms of psychosurgery are in a state of flux, so far as their critics and supporters are concerned. Some court test cases are now on tap.

All physicians are well acquainted with the various phenothiazines and associated psychotropic medications. Although the exact sites of action are not known presently for many of these drugs, some affect the cerebral cortex, the septal regions, the thalamic and subthalamic nuclei. The main therapeutic effects appear to dull those centers involving the thought processes and the emotion producing areas. In other words, and according to the immunologic concept, the erstwhile hypersensitized areas are temporarily controlled by causing them to become less sensitive to further incoming noxious stimuli. Pavlov might have termed this the inhibition of these centers.

Summary

The therapist's main role with treatment has been and continues to be the alleviation of pain produced by disorders of the psyche or soma. All behavior appears to be dependent upon afferent neural impulses which can sensitize the brain in varied amounts. The length of time these various stimuli operate is important as are their dosages and whether or not the individual has been

sensitized to such previously. Excessive psychoimmunogens (afferent stimuli) can hypersensitize these recipient cortical centers in the process of encoding the brain. Additional similar neural stimuli tend to spill over (surmenage) from the cortical areas and may hypersensitize the septal, thalamic, and subthalamic regions. The usual Darwinian behavioral response is for the individual to fight (aggression) or to run (regression) and these are produced by frustratory reactions which tend to enhance further stages of hypersensitivity in these affected areas.

Summarizing the many psychologic and psychiatric therapies and their modus operandi, the main therapeutic thrust appears to be aimed at the further prevention of pain producing stimuli from causing added hypersensitized states in the already saturated cortical and subcortical areas. Presently, the therapeutic thrusts have been concerned mainly with further pain prevention. The proper control of pain allows the individual more adequate time and attempts at homeostatic changes which favor normalcy. Proper therapeutic results are desired, no matter what form of therapy is employed by the therapist. The end result for therapy should be patient improvement through the amelioration of pain producing situations with the various present therapeutic modalities.

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Fetal Membranes Effective In Burn Dressing

Synthetic "skin" and fetal membranes have been found effective as dressings for burns, according to reports at the recent American College of Surgeons meeting. The synthetic skin is used to help remove bacteria and dead tissue from the burn wound surface, in preparation for skin grafting. The polyurethane-polyethylene material, one-sixth of an inch thick, is treated with antibiotics to help control infection, University of Cincinnati physicians said. Dr. Martin C. Robson of Yale University said fetal mem-

branes proved to be effective biological dressings in animal studies. The membranes, which encase the fetus before birth, are discarded daily in almost all hospitals and thus are available at no cost to the patient, he said. In the past, dressings have been obtained from human cadaver skin grafts or pig-skin. But those sources are not readily available in the general hospital and their use adds to "the already overwhelming cost to the burned patient," Dr. Robson said.

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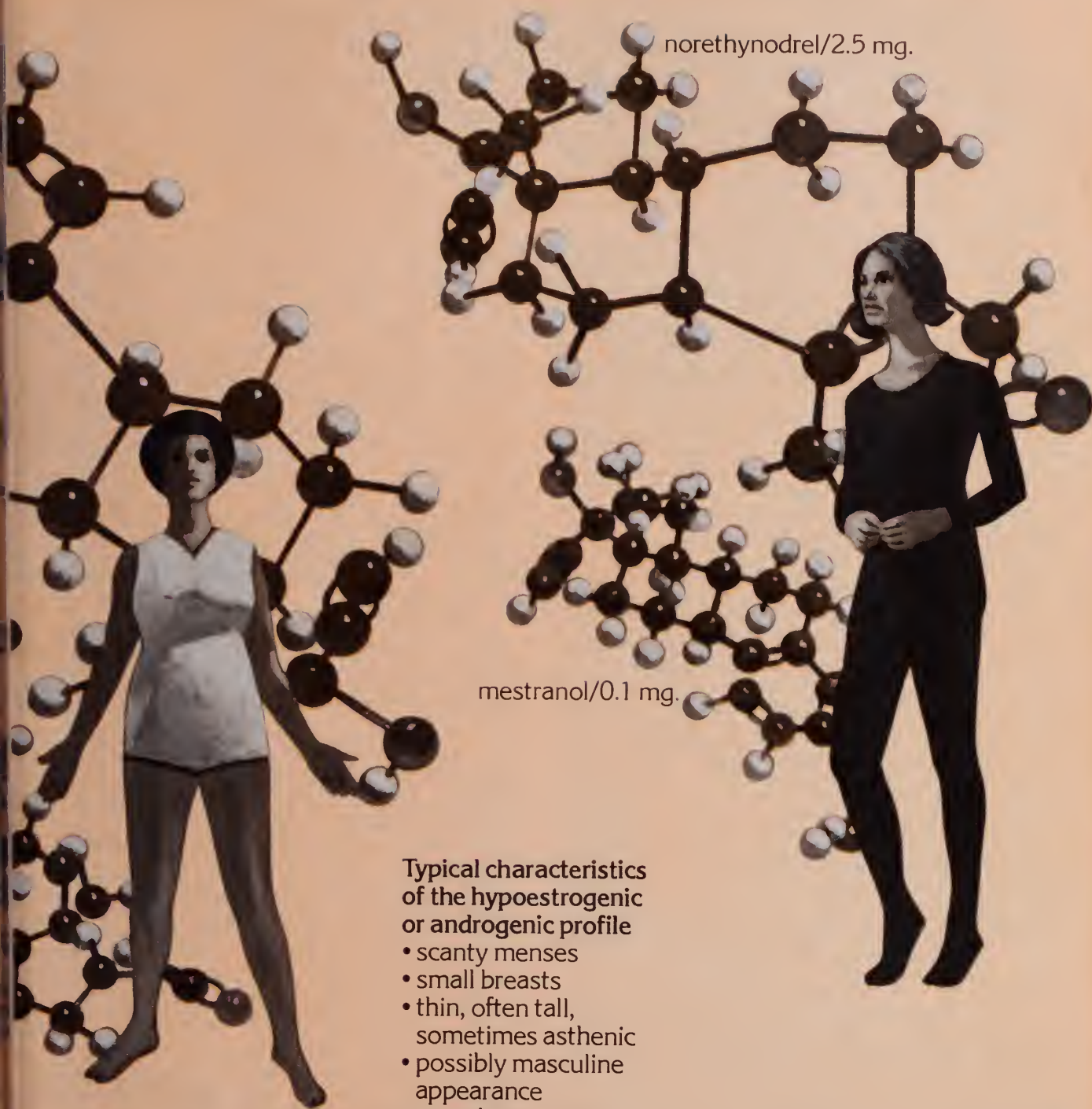
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Special note—Oral contraceptives have been marketed in the United States since 1960. Reported pregnancy rates vary from product to product. The effectiveness of the sequential products appears to be somewhat lower than that of the combination products. Both types provide almost completely effective contraception.

An increased risk of thromboembolic disease associated with the use of hormonal contraceptives has now been shown in studies conducted in both Great Britain and the United States. Other risks, such as those of elevated blood pressure, liver disease and reduced tolerance to carbohydrates, have not been quantitated with precision.

Long-term administration of both natural and synthetic estrogens in subprimate animal species in multiples of the human dose increases the frequency of some animal carcinomas. These data cannot be transposed directly to man. The possible carcinogenicity due to the estrogens can be neither affirmed nor refuted at this time. Close clinical surveillance of all women taking oral contraceptives must be continued.

Indication—Ovulen and Demulen are indicated for oral contraception.

Contraindications—Patients with thrombophlebitis, thromboembolic disorders, cerebral apoplexy or a past history of these conditions, markedly impaired liver function, known or suspected carcinoma of the breast, known or suspected estrogen-dependent neoplasia and undiagnosed abnormal genital bleeding.

Warnings—The physician should be alert to the earliest manifestations of thrombotic disorders (thrombophlebitis, cerebrovascular disorders, pulmonary embolism and retinal thrombosis). Should any of these occur or be suspected the drug should be discontinued immediately.

Retrospective studies of morbidity and mortality conducted in Great Britain and studies of morbidity in the United States have shown a statistically significant association between thrombophlebitis, pulmonary embolism, and cerebral thrombosis and embolism and the use of oral contraceptives. There have been three principal studies in Britain¹⁻³ leading to this conclusion, and one⁴ in this country. The estimate of the relative risk of thromboembolism in the study by Vessey and Doll³ was about sevenfold, while Sartwell and associates⁴ in the United States found a relative risk of 4.4, meaning that the users are several times as likely to undergo thromboembolic disease without evident cause as nonusers. The American study also indicated that the risk did not persist after discontinuation of administration and that it was not enhanced by long-continued administration. The American study was not designed to evaluate a difference between products. However, the study suggested that there might be an increased risk of thromboembolic disease in users of sequential products. This risk cannot be quantitated, and further studies to confirm this finding are desirable.

Discontinue medication pending examination if there is sudden partial or complete loss of vision, or if there is a sudden onset of proptosis, diplopia or migraine. If examination reveals papilledema or retinal vascular lesions medication should be withdrawn.

Since the safety of Ovulen and Demulen in pregnancy has not been demonstrated, it is recommended that for any patient who has missed two consecutive periods pregnancy should be ruled out before continuing the contraceptive regimen. If the patient has not adhered to the prescribed schedule the possibility of pregnancy should be considered at the time of the first missed period.

A small fraction of the hormonal agents in oral contraceptives has been identified in the milk of mothers receiving these drugs. The long-range effect to the nursing infant cannot be determined at this time.

Precautions—The pretreatment and periodic physical examinations should include special reference to the breasts and pelvic organs, including a Papanicolaou smear since estrogens have been known to produce tumors, some of them malignant, in five species of subprimate animals. Endocrine and possibly liver function tests may be affected by treatment with Ovulen or Demulen. Therefore, if such tests are abnormal in a patient taking Ovulen or Demulen, it is recommended that they be repeated after the drug has been withdrawn for two months. Under the influence of progestogen-estrogen preparations pre-existing uterine fibromyomas may increase in size. Because these agents may cause some degree of fluid retention, conditions which might be influenced by this factor, such as epilepsy, migraine, asthma, cardiac or renal dysfunction, require careful observation. In breakthrough bleeding, and in all cases of irregular bleeding per vaginam, nonfunctional causes should be borne in mind. In undiagnosed bleeding per vaginam adequate diagnostic measures are indicated. Patients with a history of psychic depression should be carefully observed and the drug discontinued if the depression recurs to a serious degree. Any possible

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influence of prolonged Ovulen or Demulen therapy on pituitary, ovarian, adrenal, hepatic or uterine function awaits further study. A decrease in glucose tolerance has been observed in a significant percentage of patients on oral contraceptives. The mechanism of this decrease is obscure. For this reason, diabetic patients should be carefully observed while receiving Ovulen or Demulen therapy. The age of the patient constitutes no absolute limiting factor, although treatment with Ovulen or Demulen may mask the onset of the climacteric. The pathologist should be advised of Ovulen or Demulen therapy when relevant specimens are submitted. Susceptible women may experience an increase in blood pressure following administration of contraceptive steroids.

Adverse reactions observed in patients receiving oral contraceptives—A statistically significant association has been demonstrated between use of oral contraceptives and the following serious adverse reactions: thrombophlebitis, pulmonary embolism and cerebral thrombosis.

Although available evidence is suggestive of an association, such a relationship has been neither confirmed nor refuted for the following serious adverse reactions: neuro-ocular lesions, e.g., retinal thrombosis and optic neuritis.

The following adverse reactions are known to occur in patients receiving oral contraceptives: nausea, vomiting, gastrointestinal symptoms (such as abdominal cramps and bloating), breakthrough bleeding, spotting, change in menstrual flow, amenorrhea during and after treatment, edema, chloasma or melasma, breast changes (tenderness, enlargement and secretion), change in weight (increase or decrease), changes in cervical erosion and cervical secretions, suppression of lactation when given immediately post partum, cholestatic jaundice, migraine, rash (allergic), rise in blood pressure in susceptible individuals and mental depression.

Although the following adverse reactions have been reported in users of oral contraceptives, an association has been neither confirmed nor refuted: anovulation post treatment, premenstrual-like syndrome, changes in libido, changes in appetite, cystitis-like syndrome, headache, nervousness, dizziness, fatigue, backache, hirsutism, loss of scalp hair, erythema multiforme, erythema nodosum, hemorrhagic eruption and itching.

The following laboratory results may be altered by the use of oral contraceptives: hepatic function: increased sulfobromophthalein retention and other tests; coagulation tests: increase in prothrombin, Factor VII, VIII, IX and X; thyroid function: increase in PBI and butanol extractable protein bound iodine, and decrease in T₃ uptake values; metyrapone test and pregnanediol determination.

References: 1. Royal College of General Practitioners: Oral Contraception and Thrombo-Embolic Disease, J. Coll. Gen. Pract. 13:267-279 (May) 1967. 2. Inman, W. H. W., and Vessey, M. P.: Investigation of Deaths from Pulmonary, Coronary, and Cerebral Thrombosis and Embolism in Women of Child-Bearing Age, Brit. Med. J. 2:193-199 (April 27) 1968. 3. Vessey, M. P., and Doll, R.: Investigation of Relationship Between Use of Oral Contraceptives and Thromboembolic Disease. Further Report, Brit. Med. J. 2:651-657 (June 14) 1969. 4. Sartwell P. E.; Masi, A. T.; Arthes, F. G.; Greene, G. R., and Smith, H. E.: Thrombembolism and Oral Contraceptives: An Epidemiologic Case-Control Study, Amer. J. Epidemiol. 90:365-380 (Nov.) 1969.

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Indication—Enovid-E is indicated for oral contraception.

The Special Note, Contraindications, Warnings, Precautions and Adverse Reactions listed above for Ovulen and Demulen are applicable to Enovid-E and should be observed when prescribing Enovid-E.

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Vital Statistics

NEW MEMBERS

Coffee County

Kirk, Andy Ellzey, b 39, mc Miss., 64, recip., Miss., 72, Medical Arts Bldg., Enterprise, Alabama 36330. GP.

Dallas County

Howell, Julian Parker, Jr., b 41, mc Ala., 71, recip., NBME 72, P. O. Box 1127, Selma, Alabama 36701. I.

Etowah County

Andrews, Edson James, Jr., b 40, mc Fla., 66, recip., Ga., 67, 401 Bay St., Gadsden, Alabama 35901.

Houston County

Croutcher, Donald Lewis, b 39, mc Ky., 66, recip., Ky., 72, 201 Kent Dr., Dothan, Alabama 36301. R.

Drewry, William Fletcher, Jr., b 39, mc Ala., 66, recip., NBME 68, 1920 Fairview Ave., Dothan, Alabama 36301. G-I.

Lee, Rufus Ernest, Jr., b 30, mc Ala., 57, sb 58, 1507 W., Main St., Dothan, Alabama 36301. A.

Silvernail, William Irving, Jr., b 26, mc N. Y., 51, recip., NBME 72, 1150 Ross Clark Circle, S. E., Dothan, Alabama 36301. N-S.

Jefferson County

Adendorff, Stuart John, b 25, mc Petoria U., S. Africa, 49, recip., N. Y., 72, 1515 6th Ave., S., Birmingham, Alabama 35233. S.

Amason, Thomas Gilbert, Jr., b 40, mc Ala., 66, sb 67, Mayfair Medical Group, 3401 Montgomery Hwy., Birmingham, Alabama 35209. Pd.

Ashford, Rowell Stanford, b 39, Meharry 62, recip., Ga., 72, 1515 6th Ave., S., Birmingham, Alabama 35233. ObG.

Bonner, Mack Stuart, b 27, mc Ga., 52, recip., Ga., 72, 1515 6th Ave., S., Birmingham, Alabama 35233. Anes.

Chatterjee, Chitta Ranjan, b 36, mc Calcutta 59, recip., Canada FLEX 72, 1515 6th Ave., S., Birmingham, Alabama 35233. U.

Collins, Margaret Casey, b 16, mc Ill., 44, recip., NBME 72, 701 Princeton Ave., S. W., Birmingham, Alabama 35211. Path.

Copeland, Kenneth Rodney, Sr., b 43, mc Ala., 70, recip., NBME 71, 800 Montclair Rd., Birmingham, Alabama 35213. Resident-S.

Cosby, Joseph Conway, b 28, mc Ala., 61, sb 57, 619 19th St., S., Birmingham, Alabama 35233. R.

Crawford, Willis Vernon, b 29, mc Ala., 56, sb 57, 1515 6th Ave., S., Birmingham, Alabama 35233. Path.

Datnow, Boris, b 38, mc Witwatersrand, S. Africa, 62, recip., Wash., FLEX 72, 1025 18th St., So., Birmingham, Alabama 35205. Path.

Jones, Robert Ellsworth, Jr., b 35, mc Bowman Gray 60, recip., N. C., 72, 1025 18th St., S., Birmingham, Alabama 35205. Path.

Nickell, William Boyd, b 37, mc Ala., 63, sb 64, 7722 Second Ave., S., Birmingham, Alabama 35206. PL.

Perry, Stephen Ross, b 42, mc Tenn., 68, recip., Miss., 72, 619 19th St., S., Birmingham, Alabama 35233. R.

AROUND THE STATE

Preston, Rhea Sutphen, b 23, mc Duke 47, recip., NBME 72, 1515 6th Ave., S., Birmingham, Alabama 35233. S.

Putnoi, Martin, b 14, mc N. Y., 38, recip., NBME 72, Lloyd Noland Hosp., Fairfield, Alabama 35064. ObG.

Sherrill, Robert Grady, Jr., b 24, mc Tenn., recip., Tenn., 72, 1515 6th Ave., S., Birmingham, Alabama 35233. S.

Sterling, William Arnold, Jr., b 36, mc Penn., 62, recip., NBME 72, University Station, Birmingham, Alabama 35294. S.

Tiller, Mary John Brown, b 17, mc Tulane 51, recip., La., 67, 1912 8th Ave., S., Birmingham, Alabama 35205. Public Health.

Tiller, Ralph Earl, b 25, mc Tulane 51, recip., La., 67, 1601 6th Ave., S., Birmingham, Alabama 35233. Pd.

Wattie, William John, b 38, mc Otago New Zealand, 62, Limited Lic., 72, 619 19th St., S., Birmingham, Alabama 35233. R.

Zieburtz, Robert Henry, b 33, mc Basel, Switzerland 68, Limited Lic., 71, University Station, Birmingham, Alabama 35294. N.

Lauderdale County

Tinsley, Terry Brian, b 42, mc Tenn., 66, recip., Miss., 72, 883 Florence Blvd., Florence, Alabama 35630. S.

Lee County

Burkart, Oswald Godfrey, b 19, mc Chicago 52, recip., Ind., 72, Drake Student Health Center, Auburn, Alabama 36830. GP.

Madison County

Duncan, Thomas Clyde, b 41, mc Tenn., 66, recip., Tenn., 71, 410 Lowell Dr., Huntsville, Alabama 35801. GP.

Maynor, Robert Clayton, Jr., b 39, mc Miss., 66, recip., Miss., 70, 3973 Christopher Dr., Birmingham, Alabama 35243.

Marion County

Sasser, Ramon Carrol, b 36, mc Tenn., 62,

recip., Miss., 65, Hamilton, Alabama 35570. GP.

Kerr, John McClure, II, b 44, mc Ky., 68, recip., Ky., 72, Hamilton, Alabama 35570. GP.

Marshall County

Lawless, Frederick Wesley, b 31, mc Ala., 71, sb 71, P. O. Box 158, Crossville, Alabama 35962. GP.

Mobile County

Campbell, Michael Lory, III, b 27, mc Georgetown, 53, recip., NBME 58, 1731 Springhill Ave., Mobile, Alabama 36604. I-Hematology.

Curtright, William Henry, Jr., b 36, mc Ala., 62, sb 63, 3151 Dauphin St., Mobile, Alabama 36606. ObG.

Gipson, Charles Curtis, b 39, mc Wash., 65, recip., NBME 72, #619 1st Federal Tower, Mobile, Alabama 36606. Oph.

Hart, George Rodney, b 42, mc La., 68, recip., La., 72, 266 S. McGregor Ave., Mobile, Alabama 36608. GP.

Lousteau, Jeffrey Michael, b 43, mc La., 69, recip., La., 71, 2451 Fillingim St., Mobile, Alabama 36617.

Thomas, William Earl, b 41, mc Miss., 66, recip., Miss., 67, 2451 Fillingim St., Mobile, Alabama 36617. S.

Montgomery County

Haedicke, Thomas Arthur, b 17, mc Wayne 43, recip., Mich., 69, 304 Dexter Ave., Montgomery, Alabama 36104.

Sims, William Graham, b 37, mc Ga., 63, recip., Ga., 72, 2119 E., S., Blvd., Montgomery, Alabama 36111. PL.

Tuscaloosa County

Weston, Don Litton, b 35, mc Virginia 62, recip., Virginia 72, 921 3rd Ave., E., Suite 102, Tuscaloosa, Alabama 35401. S.

(Continued on Page 864)

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AROUND THE STATE

(Continued from Page 862)

Willard, William Robert, b 08, mc Yale 34, recip., NBME 72, Student Health Center, Tuscaloosa, Alabama 35401. Public Health.

Washington County

Ramsey, Robert Henry, b 22, mc Wash., 45, recip., Missouri 72, P. O. Box 92, Millry, Alabama 36558. Or.

MEMBERS DECEASED

Jefferson County

Burttram, Hobson D., Birmingham, Alabama, Deceased 1-8-73

Conwell, H. Earle, Birmingham, Alabama, Deceased 3-18-73

Glasgow, Richard D., Fairfield, Alabama, Deceased

Rike, Heber C., Birmingham, Alabama, Deceased

CHANGES OF ADDRESS

Bibb County

Owings, William O., present Centreville to 128 Nicholson Ave., Centreville, Alabama 35042.

Bullock County

Klingler, Harold, present Montgomery to Fitzpatrick, Alabama 36029.

Calhoun County

Stallworth, Nicholas R., present Anniston to 1227 Leighton Ave., Anniston, Alabama 36201.

Winslow, Robert C., present Anniston to C-3 McMillian Terrace, Anniston, Alabama 36201.

Chilton County

Foshee, Phillip D., present Clanton to 106 Popwell Ave., Clanton, Alabama 35045.

Johnson, Joe H., present Clanton to 1100 Lay Dam Rd., Clanton, Alabama 35045.

Rennings, Wilbur W., present Clanton to 401 Lay Dam Rd., Clanton, Alabama 35045.

Coffee County

Stanley, James F., present Enterprise to P. O. Box 66, Enterprise, Alabama 36330.

Dale County

Holman, Norman W., present Ozark to 311 James St., Ozark, Alabama 36360.

Dallas County

Bayne, Rembert D., present Selma to 1 King St., Selma, Alabama 36701.

Callaway, Eugene, Jr., present Selma to P. O. Box 385, Selma, Alabama

Cole, David O., Sr., present Selma to P. O. Box 557, Selma, Alabama 36701.

Cox, Clyde B., Jr., present Selma to 1013 Felix Rd., Selma, Alabama 36701.

Moore, Jasper D., present Selma to P. O. Box 1425, Selma, Alabama 36701.

Moseley, Samuel O., Jr., present Selma to 1013 Felix Rd., Selma, Alabama 36701.

Elmore County

Edwards, Winston A., present Wetumpka to Rt. 5 Box 361, Wetumpka, Alabama 36092.

Escambia County

St. Amant, Chester P., present Atmore to P. O. Drawer R—204 Pensacola Ave., Atmore, Alabama 36502.

Etowah County

Burns, James H., present Gadsden to P. O. Box 268 Gadsden, Alabama 35902.

Ford, Henry G., present Gadsden to 1011 Forrest Ave., Gadsden, Alabama 35902.

Gillespie, J. P., Jr., present Gadsden to 1121 Chestnut St., Gadsden, Alabama 35902.

Skelton, Bennie L., present Gadsden to 1401 Rainbow Dr., P. O. Box 1609, Gadsden, Alabama 35902.

(Continued on Page 866)

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Dorothy R. Mooney
Administrator

Member Georgia Hospital Association

(Continued from Page 864)

Smith, M. Dale, present Gadsden to 313 S., 5th St., P. O. Box 284, Gadsden, Alabama 35902.

Houston County

Cook, Roddy D., present Dothan to 211 West Main St., Dothan, Alabama 36301.

Griffin, Stanley W., present Dothan to 1007 Montezuma, Dothan, Alabama 36301.

Jones, Patrick B., Jr., present Dothan to 1914 Fairview Ave., Dothan, Alabama 36301.

Jefferson County

Aldrete, Joaquin S., present Birmingham to University Station, Birmingham, Alabama 35294.

Alford, Charles A., present Birmingham to 1720 7th Ave., South, Birmingham, Alabama 35294.

Bagby, Harry C., present Birmingham to 3401 Montgomery Hwy., Birmingham, Alabama 35209.

Bashinsky, Leo M., present Birmingham to 75 Country Club Blvd., Birmingham, Alabama 35209.

Brannon, Robert M., present Birmingham to 2644 Park Lane Court East Apt., F, Birmingham, Alabama 35223.

Casey, Albert E., present Birmingham to 1704 11th Ave., South, Birmingham, Alabama 35205.

Crabtree, James C., Jr., present Birmingham to 801 Princeton Ave., Birmingham, Alabama 35211.

Daniel, William A., Jr., present Birmingham to 1601 6th Ave., South, Birmingham, Alabama 35233.

Darnell, Henry L., Jr., present Birmingham to 8516-A 1 Ave., North, Birmingham, Alabama 35206.

Davis, Harwell, G., present Fairfield to Lloyd Noland Hosp., and Clinic, Fairfield, Alabama 35064.

Davis, Sarah F., present Birmingham to 1720 7th Ave., South, Birmingham, Alabama 35233.

Diethelm, Arnold G., present Birmingham to University Station, Dept., of Surgery, Birmingham, Alabama 35294.

Dimick, Alan R., present Birmingham to University Station Dept., of Surgery, Birmingham, Alabama 35294.

Hicks, Guy M., present Birmingham to 1717 11th Ave., South, Birmingham, Alabama 35205.

Littleton, Harry, J., present Birmingham to 1717 11th Ave., South Birmingham, Alabama 35205.

Lupton, Charles H., present Birmingham to 1600 8th Ave., South, Birmingham, Alabama 35294.

McGowan, Eoline I., present Birmingham to 2316-4th Ave., North, Birmingham, Alabama 35202.

Pittman, James A., present Birmingham to 700 South 19th St., Birmingham, Alabama 35233.

Stewart, Roddie L., present Birmingham to 800 Montclair Rd., Birmingham, Alabama 35213.

Straughn, John M., present Birmingham to 1717 11th Ave., South, Birmingham, Alabama 35205.

White, Boyce J., II, present to 3308 Cliff Rd., Apt., 3, Birmingham, Alabama 35205.

Zarzaaur, Joseph A., present Birmingham to 1533 Valley Ave., Birmingham, Alabama 35209.

Lauderdale County

Hardiman, John O., present Florence to Colonial Manor, Professional Bldg., 2111 Cloyd Blvd., Florence, Alabama 35630.

McCown, J. Dillard, present Florence to 2111 Cloyd Blvd., Florence, Alabama 35630.

AROUND THE STATE

Nofzinger, John D., present Florence to 216 Marengo St., Suite B, Florence, Alabama 35630.

Lowndes County

Meadows, Henry H., Jr., present Hayneville to P. O. Box 8 Lowndesboro, Alabama 36752.

Macon County

Hester, George C., Jr., present Tuskegee to Lake Shore Clinic, Tuskegee, Alabama 36083.

Madison County

Bryson, Roscoe E., present Huntsville to 905 Madison St., Huntsville, Alabama 35801.

Marcus, Elliot L., present Huntsville to 930 Franklin St., Suite 206 Huntsville, Alabama 35801.

Mosley, Everett S., present Huntsville to 2305 Big Cove Rd., Huntsville, Alabama 35801.

Marshall County

Haden, Robert H., present Guntersville to 1500 Gunter Ave., Guntersville, Alabama 35976.

Venning, Edward W., present Guntersville to 509 Gunter Ave., Guntersville, Alabama 35976.

Mobile County

Blake, William A., present Mobile to 4300 Cedars, Mobile, Alabama 36608.

Edmonds, Leland C., present Mobile to 241 Cox St., Mobile, Alabama 36604.

Eggers, Earl M., present Mobile to 241 Cox St., Mobile, Alabama 36604.

Jordan, Jerry D., present Mobile to 2451 Fillingim St., Mobile, Alabama 36617.

King, Robert B., present Mobile to P. O. Box 1524, Mobile, Alabama 36601.

Langley, John O., present Mobile to 156 Louiselle St., Mobile, Alabama 36607.

Newman, Leonce D., present Mobile to 1410 Government St., Mobile, Alabama 36604.

Ozment, Elmo D., present Mobile to 192 Louiselle St., Mobile, Alabama 36607.

Rumpanos, Socrates N., present Mobile to 211 S., Catherine St., Mobile, Alabama 36604.

Taylor, John S., present Mobile to 1453 Springhill Ave., Mobile, Alabama 36604.

Montgomery County

Johnson, H. Cecil, present Montgomery to 2119 East South Blvd., Suite 200, Montgomery, Alabama 36111.

Penton, Robert S. B., present Tuscaloosa to YMCA Box 1129 Tuscaloosa, Alabama 35401.

Robbins, Charles N., present Montgomery to 750 Washington St., Montgomery, Alabama 36104.

Woodfin, M. Clarke, Jr., present Montgomery to 208 S., Church Ave., Dyersburg, Tenn., 38024.

Morgan County

Howell, Charles B., present Decatur to 1304 13th Ave., S. E., Decatur, Alabama 35601.

Tuscaloosa County

Folsom, Walter C., present Tuscaloosa to Dr. R. East Side Station, Tuscaloosa, Alabama 35401.

Fowler, Inez, present Tuscaloosa to 121 10th St., N. W., Fayette, Alabama 35555.

Glass, Sarah E., present Tuscaloosa to 1101 W., Mareno, Pensacola, Fla., 35201.

Guin, James C., Jr., present Tuscaloosa to 305 Professional Bldg., Tuscaloosa, Alabama 35401.

Nelson, John H., present Tuscaloosa to 535 River Rd., Tuscaloosa, Alabama 35401.

AROUND THE STATE

Reese, Dorothy A., present Northport to 535 River Rd., East, Tuscaloosa, Alabama 35401.

Richards, Paul G., present Tuscaloosa to 1253-37th Ave., East, Tuscaloosa, Alabama 35401.

Richardson, Luther W., Jr., present Tuscaloosa to 901-15th St., East, Tuscaloosa, Alabama 35401.

Shields, James, present Tuscaloosa to Path., Dept., Druid City Hosp., Tuscaloosa, Alabama 35201.

Tatum, Albert F., Jr., present Tuscaloosa to Professional Bldg., Tuscaloosa, Alabama 35401.

Walker County

Smith, Prentiss L., present Jasper to 1105 7th Ave., Jasper, Alabama 35501.

NEW TELEPHONE NUMBERS

Adendorff, S. J., Jefferson	933-9211
Amason, T. G., Jr., Jefferson	870-1273
Andrews, G. L., Dale	774-5182
Andrews, E. J., Jr., Etowah	543-3200
Armbruster, C. B., Mobile	675-1622
Ashford, R. S., Jefferson	933-1820
Bonner, M. S., Jefferson	933-9211
Burkart, O. G., Lee	826-4416
Campbell, M. L., III, Mobile	483-3668
Chatterjee, C. R., Jefferson	933-9211
Collins, M. C., Jefferson	788-9567
Cook, R. D., Houston	794-9476
Copeland, K. R., Jefferson	591-5320
Cosby, J. C., Jefferson	934-5131
Crawford, W. V., Jefferson	933-9211
Croutcher, D. L., Houston	794-4470
Curtright, W. H., Jr., Mobile	476-3377
Datnow, Boris, Jefferson	933-8221
Doyle, J. C., Barbour	687-5761
Drewry, W. F., Jr., Houston	794-3194
Duncan, T. C., Madison	536-3321
Gipson, C. C., Mobile	479-3194
Haedicke, T. A., Montgomery	272-5717
Hart, G. R., Mobile	342-7111
Herod, J. W., Jr., Coffee	347-3404
Hester, G. C., Jr., Macon	727-5900
Howell, J. P., Jr., Dallas	872-3437

Jones, R. E., Jr., Jefferson	933-8221
Kerr, J. M., II, Marion	921-3151
Kirk, A. E., Coffee	347-2693
Langley, J. O., Mobile	432-6561
Lawless, F. W., Marshall	528-7173
Lee, R. E., Jr., Houston	794-2718
Lewis, T. K., Jr., Tuscaloosa	553-3760
Lousteau, J. M., Mobile	
Marcus, E. L., Madison	533-4334
Maynor, R. C., Jr., Madison	967-5263
McCain, P. P., Morgan	355-9711
McCrimmon, C. H., Jr., Calhoun	237-5421
McLeod, C. D., Covington	347-9640
Nickell, W. B., Jefferson	838-1248
Perry, S. R., Jefferson	934-5670
Petrey, B. D., Dale	774-5182
Preston, R. S., Jefferson	933-1820
Putnoi, Martin, Jefferson	785-2121
Ramsey, R. H., Washington	846-2692
Sasser, R. C., Marion	921-3153
Sherrill, R. G., Jr., Jefferson	933-9211
Silvernail, W. I., Jr., Houston	
Sims, W. G., Montgomery	281-4040
Sox, J. H., Montgomery	288-0051
Sterling, W. A., Jr., Jefferson	934-2480
Thomas, W. E., Mobile	473-0341
Thompson, D. F., Lauderdale	764-8641
Tiller, M. J. B., Jefferson	934-4340
Tiller, R. E., Jefferson	934-5345
Tinsley, T. B., Lauderdale	766-2720
Turnage, R. G., Etowah	547-4911
Waldrop, S. D., Dallas	933-8141
Wattie, W. J., Jefferson	934-5345
Weston, D. L., Tuscaloosa	345-4473
Willard, W. R., Tuscaloosa	348-7942
Zieburtz, R. H., Jefferson	934-4871

MEMBERS REINSTATED

Dallas County

Waldrop, Sam Dudley, b 26, mc Ala., 47, sb 48, P. O. Box K, Selma, Alabama 36701.

Etowah County

Turnage, Robert Griffing, b 28, mc 51, recip., Miss., 60, Holy Name of Jesus Hosp., Gadsden, Alabama 35902. Anes.

(Continued on Page 873)



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Remember that Tandearil is not a simple analgesic. It should not be used on patients responding to routine therapy. Before using, please read the prescribing information. It's summarized below.

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Important Note: This drug is not a simple analgesic. Do not administer casually. Carefully evaluate patients before starting treatment and keep them under close supervision. Obtain a detailed history, and complete physical and laboratory examination (complete hemogram, urinalysis, etc.) before prescribing and at frequent intervals thereafter. Carefully select patients, avoiding those responsive to routine measures, contraindicated patients or those who cannot be observed frequently. Warn patients not to exceed recommended dosage. Short-term relief of severe symptoms with the smallest possible dosage is the goal of therapy. Dosage should be taken with meals or a full glass of milk. Patients should discontinue the drug and report immediately any sign of: fever, sore throat, oral lesions (symptoms of blood dyscrasia); dyspepsia, epigastric pain, symptoms of anemia, black or tarry stools or other evidence of intestinal ulceration or hemorrhage, skin reactions, significant weight gain or edema. A one-week trial period is adequate. Discontinue in the absence of a favorable response. Restrict treatment periods to one week in patients over sixty.

Indications: Acute gouty arthritis, rheumatoid arthritis, rheumatoid spondylitis.

Contraindications: Children 14 years or less; senile patients; history or symptoms of G.I. inflammation or ulceration including severe, recurrent or persistent dyspepsia; history or presence of drug allergy; blood dyscrasias; renal, hepatic or cardiac dysfunction; hypertension; thyroid disease; systemic edema; stomatitis and salivary gland enlargement due to the drug; polymyalgia rheumatica and temporal arteritis; patients receiving other potent chemotherapeutic agents, or long-term anti-coagulant therapy.

Warnings: Age, weight, dosage, duration of therapy, existence of concomitant diseases, and concurrent potent chemotherapy affect incidence of toxic reactions. Carefully instruct and observe the individual patient, especially the aging (forty years and over) who have increased susceptibility to the toxicity of the drug. Use lowest effective dosage. Weigh initially unpredictable benefits against po-

tential risk of severe, even fatal, reactions. The disease condition itself is unaltered by the drug. Use with caution in first trimester of pregnancy and in nursing mothers. Drug may appear in cord blood and breast milk. Serious, even fatal, blood dyscrasias, including aplastic anemia, may occur suddenly despite regular hemograms, and may become manifest days or weeks after cessation of drug. Any significant change in total white count, relative decrease in granulocytes, appearance of immature forms, or fall in hematocrit should signal immediate cessation of therapy and complete hematologic investigation. Unexplained bleeding involving CNS, adrenals, and G.I. tract has occurred. The drug may potentiate action of insulin, sulfonylurea, and sulfonamide-type agents. Carefully observe patients taking these agents. Nontoxic and toxic goiters and myxedema have been reported (the drug reduces iodine uptake by the thyroid). Blurred vision can be a significant toxic symptom worthy of a complete ophthalmological examination. Swelling of ankles or face in patients under sixty may be prevented by reducing dosage. If edema occurs in patients over sixty, discontinue drug.

Precautions: The following should be accomplished at regular intervals: Careful detailed history for disease being treated and detection of earliest signs of adverse reactions; complete physical examination including check of patient's weight; complete weekly (especially for the aging) or an every two week blood check; pertinent laboratory studies. Caution patients about participating in activity requiring alertness and coordination, as driving a car, etc. Cases of leukemia have been reported in patients with a history of short- and long-term therapy. The majority of these patients were over forty. Remember that arthritic-type pains can be the presenting symptom of leukemia.

Adverse Reactions: This is a potent drug; its misuse can lead to serious results. Review detailed information before beginning therapy. Ulcerative esophagitis, acute and reactivated gastric and duodenal ulcer with perforation and hemorrhage, ulceration and perforation of large bowel, occult G.I. bleeding with anemia,

gastritis, epigastric pain, hematemesis, dyspepsia, nausea, vomiting and diarrhea, abdominal distention, agranulocytosis, aplastic anemia, hemolytic anemia, anemia due to blood loss including occult G.I. bleeding, thrombocytopenia, pancytopenia, leukemia, leukopenia, bone marrow depression, sodium and chloride retention, water retention and edema, plasma dilution, respiratory alkalosis, metabolic acidosis, fatal and nonfatal hepatitis (cholestasis may or may not be prominent), petechiae, purpura without thrombocytopenia, toxic pruritus, erythema nodosum, erythema multiforme, Stevens-Johnson syndrome, Lyell's syndrome (toxic necrotizing epidermolysis), exfoliative dermatitis, serum sickness, hypersensitivity angitis (polyarteritis), anaphylactic shock, urticaria, arthralgia, fever, rashes (all allergic reactions require prompt and permanent withdrawal of the drug), proteinuria, hematuria, oliguria, anuria, renal failure with azotemia, glomerulonephritis, acute tubular necrosis, nephrotic syndrome, bilateral renal cortical necrosis, renal stones, ureteral obstruction with uric acid crystals due to uricosuric action of drug, impaired renal function, cardiac decompensation, hypertension, pericarditis, diffuse interstitial myocarditis with muscle necrosis, perivascular granulomata, aggravation of temporal arteritis in patients with polymyalgia rheumatica, optic neuritis, blurred vision, retinal hemorrhage, toxic amblyopia, retinal detachment, hearing loss, hyperglycemia, thyroid hyperplasia, toxic goiter, association of hyperthyroidism and hypothyroidism (causal relationship not established), agitation, confusional states, lethargy; CNS reactions associated with overdosage, including convulsions, euphoria, psychosis, depression, headaches, hallucinations, giddiness, vertigo, coma, hyperventilation, insomnia; ulcerative stomatitis, salivary gland enlargement. (B)98-146-800-F (10/71)

For complete details, including dosage, please see full prescribing information.

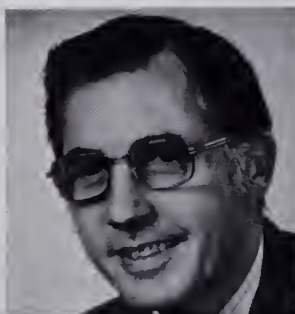
GEIGY Pharmaceuticals
Division of CIBA-GEIGY Corporation
Ardley, New York 10502

Opinion & Dialogue

"Prescription drugs – who should determine the maker?"

Dispenser of Medicine

Clifton J. Latiolais
President
American
Pharmaceutical
Association



Maker of Medicine

C. Joseph Stetler
President
Pharmaceutical
Manufacturers
Association



"Too many doctors are indifferent to the economic consequences of their decisions." So stated a recent issue of *Medical News Report* (December 4, 1972), an independent weekly newsletter published by former AMA Chief Executive F. J. L. Blasingame, M.D.

Doctor, are you indifferent...?

In discussing an anticipated increase in Blue Shield rates, Dr. Blasingame's newsletter had this to say:

"In general, it can be said, MD's have given the impression they are not particularly concerned with the increase in cost of health care to their patients...

"True, an MD's training is primarily scientific, but in the real world of practice, all of his scientific decisions have a price tag, or an economic impact. The economics of health care beckon the practitioner's attention. Concern for economics of medicine

When the pharmacist recommends that a drug product other than the one ordered be dispensed, the prescriber invariably permits the change when he feels the best interests of the patient will be served.

Shortcomings of Pro-Substitution Argument

The fact remains that it is necessary for the prescriber to know that the change is being contemplated, and to be in a position to consent or demur. Without that opportunity, the unilateral decision of the pharmacist made in the absence of clinical knowledge of the patient, could expose him to needless risks, and in addition, jeopardize the relationship between the professions of Pharmacy and Medicine. In my view, there is nothing in the pro-substitution argument that offsets these risks.

The Issue of Drug Knowledge

Substitution advocates claim that the primary justification for changing the rules is the desire to better utilize pharmacists' knowledge about drugs. Yet the pharmacist's task to keep current on the entire field of drug therapy, to some degree puts him at a disadvantage. Most often, a practicing physician will need expert knowledge of no more than 2

should be an obligation of medical practice...

"Medical societies ought to conduct continuing campaigns to point out the substantial savings that could be realized thru deductible insurance and protection for catastrophic illness. At the very least, they should, in the patients' interest, question the tactics of any insurance organization that raises health care costs by forcing policyholders to buy insurance they may not need or want and probably won't ever use.

"Too many doctors are indifferent to the economic consequences of their decisions. Too many, for example, habitually hospitalize patients for the convenience of the MD. It's nonsense to deny such habits exist...

"Doctors, thru their medical societies, have unhesitatingly appealed to their patients for support in the fight against government interference with the private practice of medicine. And the public in the past has responded. It's time the American Medical Association and state and local medical societies paid off the debt by decisive action to hold down the cost of medical care."

Cost of Drugs

Insurance rates and hospital charges are only two factors in health

or 30 drugs that he selects to treat the majority of conditions encountered in his practice. Moreover, the physician's choice of a specific brand is based on his knowledge of the patient's medical history and current condition, and his experiences with the particular manufacturer's product.

Some substitution proponents have argued that the dispensing of a prescription is a simple two-party transaction between the pharmacist and the patient, and that a substituting pharmacist may avoid even a technical breach of contract by simply notifying the patient that he is making the substitution. I would judge that few courts would be sympathetic toward a pharmacist who substituted without physician approval and who undertook a legal defense that seeks to make the patient responsible for the pharmacist's actions.

Reduced Prescription Prices?

Substitution advocates are appealing to the consumer, and particularly the consumer activist, that reduced prescription prices could follow legalization of substitution. We have seen absolutely no evidence to justify this claim. To the contrary, experience in Alberta, Canada, where substitution is authorized, suggests

care costs. The cost of drugs—both prescription and nonprescription—is another.

And when it comes to drug costs, the nation's pharmacists are concerned. Through their national professional society, the American Pharmaceutical Association, pharmacists are advising the public to use nonprescription medication cautiously and conservatively, and to seek the advice of their pharmacist before selecting or purchasing such drugs.

Outdated Laws

The pharmacist also is aware that when it comes to prescription drugs, often he has an even greater opportunity to reduce the cost to the patient—with no sacrifice in the quality of the medication dispensed. But in many states, outdated and antiquated laws prevent the pharmacist from engaging in drug product selection. "Drug product selection" simply means that the pharmacist functions in the patient's interest by consciously choosing, from the multiple brands available, a low-cost quality brand of the specific drug to be dispensed in response to the physician's prescription order.

Much misinformation has been purposely spread by those who stand to gain financially by maintaining

high drug costs to the public. An endless stream of propaganda has emanated from the drug industry in an effort to persuade the medical profession that these so-called anti-substitution laws should be retained. And as long as these laws are retained, the drug industry will continue its current marketing practices which contribute unnecessarily to high drug costs to patients. These practices also are inviting government agencies to expand their restrictive controls on physicians and pharmacists.

APhA Efforts

As pharmacists, we are concerned about health care costs. We hope that every physician shares our concern on this vital issue, and will give his personal support to the constructive efforts APhA has undertaken in the interest of all patients.

(For a complete discussion of drug product selection, you are invited to request a free copy of the "White Paper on the Pharmacist's Role in Product Selection" from: American Pharmaceutical Association, 2215 Constitution Avenue, N.W., Washington, D.C. 20037.)

the opposite.

Many pharmacists understandably are concerned about the cost of maintaining multiple stocks of similar products. While there is no doubt that inventory costs rise when additional brands are stocked, it would be interesting to know how much they rise, and how many pharmacists actually stock *all* brands—of, say, ampicillin or tetracycline—or how long they keep "slow moving" products on their shelves before they are returned for credit. To ask that the industry eliminate multiple sources is to ask competitors to stop competing.

Drug Substitution—A License for the Unethical

Anti-substitution repeal would favor "corner cutting" pharmacists and manufacturers. For them, free substitution would be not a right, but a license. As an aftermath, it is quite likely that the confidence of both physicians and patients in the profession of Pharmacy would be eroded, as revelations about the unconscionable behavior of an undisciplined few were magnified in the press or in professional circles.

Summary

In short, what the American Pharmaceutical Association advo-

cates as a broad-spectrum panacea looks to us to be not only a minority view (advocacy of substitution is by no means a uniform policy in Pharmacy), but also an extraordinarily costly and ineffective remedy, whose side effects are odious. We believe (1) that an impressive majority of pharmacists prefer to work with Medicine and with industry, for the consumer, and for the general good, (2) that they seek the privilege to substitute when the patient might gain and when the patient's doctor agrees, and (3) that they seek to work for the resolution of genuine grievances openly and professionally.

(For amplification of PMA views, please write for our booklet, "The Medications Physicians Prescribe: Who Shall Determine the Source?" It is available from: Pharmaceutical Manufacturers Association, 1155 Fifteenth Street, N.W., Washington, D.C. 20005.)

Pharmaceutical
Manufacturers Association
1155 Fifteenth Street, N.W.
Washington, D.C. 20005





Placidyl® (ETHCHLORVYNOL)

Brief Summary

Indications—Placidyl (ethchlorvynol) is indicated as short-term hypnotic therapy in the management of insomnia.

Contraindications—Drug hypersensitivity and porphyria.

Warnings—Not recommended during the first and second trimester of pregnancy. Caution patients of possible combined exaggerated effects with alcohol, barbiturates, tranquilizers or other CNS depressants. Exaggerated effects might result in blurring of vision, paralysis of accommodation and profound hypnosis. Caution patients concerning driving a motor vehicle, operating machinery, or other hazardous operations requiring alertness after taking the drug. ADMINISTER WITH CAUTION TO PATIENTS WITH SUICIDAL TENDENCIES AND DO NOT PRESCRIBE LARGE QUANTITIES OF THE DRUG. Adjustment of the dosage of oral anticoagulants might be necessary when beginning ethchlorvynol therapy, during therapy, or after stopping therapy. This drug is not recommended for use in children. PLACIDYL HAS THE POTENTIAL FOR THE DEVELOPMENT OF PSYCHOLOGICAL AND PHYSICAL DEPENDENCE. INSTANCES OF SEVERE WITHDRAWAL SYMPTOMS, INCLUDING CONVULSIONS AND DELIRIUM CLINICALLY SIMILAR TO THOSE SEEN WITH BARBITURATES, HAVE BEEN REPORTED IN PATIENTS TAKING REGULAR DOSES AS LOW AS 1000 MG. PER DAY OVER A PERIOD OF TIME WHEN THE DRUG WAS SUDDENLY DISCONTINUED. PROLONGED ADMINISTRATION OF THE DRUG IS NOT RECOMMENDED. Addiction-prone patients or those who are likely to increase dosages of the drug on their own initiative should be observed for evidence of signs or symptoms which may indicate possible early withdrawal or abstinence symptoms. Signs and symptoms associated with withdrawal and abstinence include unusual anxiety, tremor, ataxia, slurring of speech, memory loss, perceptual distortions, irritability, agitation and delirium. Other less well defined signs and symptoms, not necessarily due to withdrawal and abstinence, may include anorexia, nausea or vomiting, weakness, dizziness, sweating, muscle twitching and weight loss. Abrupt discontinuance of Placidyl following prolonged overdosage may result in convulsions and delirium.

Precautions—Toxic amblyopia has been reported with long-term continuous use of ethchlorvynol. Permanent visual defects have been observed, although amblyopia has improved after discontinuation of the drug. Drug dosage should be limited for elderly and debilitated patients to the smallest effective amount. If pain is present, this drug should only be given if insomnia persists after pain is controlled with analgesics. Caution is advised in prescribing the drug for patients who are being treated with either MAO inhibitors or antidepressants. Transient delirium has been reported with the combination of Placidyl and amitriptyline. Drug dosage should be reduced if prescribed for patients receiving MAO inhibitors or antidepressants. Caution should be exercised in patients with impaired hepatic or renal function. Patients who respond unpredictably to barbiturates or alcohol, or who exhibit excitement and release of inhibition in association with such agents, may also react in this way to Placidyl. Rarely, patients may exhibit symptoms suggestive of an unusual susceptibility to the drug; such as prolonged hypnosis, profound muscular weakness, excitement, hysteria, or syncope without marked hypotension. Transient giddiness or ataxia may occur.

Adverse Reactions—Hypotension, nausea or vomiting, gastric upset, aftertaste, blurring of vision, dizziness, facial numbness, and allergic reaction typified by urticaria have been reported following Placidyl administration. Mild "hangover" and symptoms of mild excitation have occurred in some patients. There have been rare reports of cholestatic jaundice occurring in patients taking ethchlorvynol. A few cases of thrombocytopenia have been reported in patients receiving ethchlorvynol. 306433

Give us his nights.

Prescribe Placidyl. Chances are, we'll give him a good night's sleep.

Insomnia often accompanies a cardiovascular episode. How many nights does he lie awake, awaiting exactly what he fears most . . . another stroke, another heart attack? He doesn't need fear. He needs sleep.

When sleep is synonymous with therapy, remember . . . Placidyl is synonymous with sleep. It has been for over 17 years.

If time is the criterion to inspire your confidence . . . you can rest assured with Placidyl.

Prescribed by physicians for over 17 years.

Placidyl®



(ETHCHLORVYNOL CAPSULES, 500 or 750 mg.)



AROUND THE STATE

(Continued from Page 868)

Montgomery County

Sox, Joe Howle, b 38 mc Ala., 64, sb 65, State Health Dept., Montgomery, Alabama 36104.

Tuscaloosa County

Lewis, Thomas Knight, Jr., b 22, mc Emory 51, recip., Ga., 58, Veterans, Adm., Hosp., Loop Rd., Tuscaloosa, Alabama 35401. Pd.

CHANGE OF SPECIALTY

Jefferson County

Boyd, David H., Lloyd Noland Hosp., Fairfield, Alabama 35064. I-GE.

Cook, Malcolm C., Memorial Hosp., Bessemer, Alabama 35020. Anes.

Randolph County

Ussery, Gordon C., Jr., Box 392 Wadley Hwy., Roanoke, Alabama 36274. S.

Tuscaloosa County

Brandes, Peter I., Student Health Center, Tuscaloosa, Alabama 35486. Student Health.

Quenzer, Fred A., Student Health Center, Tuscaloosa, Alabama 35486. Student Health.

MEMBERS TRANSFERRED

Cullman County

Brower, Walter J., % Cullman Hosp., P. O. Box 1108, Cullman, Alabama 35055, From Jefferson County Medical Society. R.

Tuscaloosa County

DeShazo, W. F., University Health Center, P. O. Box Y, University, Alabama 35486, From Clarke County Medical Society. GP.

MEMBERS REMOVED

Baldwin County

Pond, Elizabeth L., Montrose, Alabama, Moved from State

Clarke County

Bowling, Robert S., Jackson, Alabama, Transfer to Nonmember

Crenshaw County

Neshat, Amir A., Luverne, Alabama, Moved from State

Dallas County

Sapp, Gerald L., Selma, Alabama, Moved from State

Escambia County

McGrew, Richard M., Jr., Midland, Alabama, Moved from State

Wood, Herman C., Brewton, Alabama, Moved from State

Houston County

Kerley, C. McCord, Dothan, Alabama, Moved from State

Lamar County

Box, William C., Birmingham, Alabama, Transfer to Nonmember

Lauderdale County

Bennett, Ann, Florence, Alabama, Transfer to Nonmember

Ellis, Bert H., Florence, Alabama, Moved from State

Lee County

Knapp, Byron S., Auburn, Alabama, Moved from State

Madison County

Clanton, Jerry N., Huntsville, Alabama, Moved from State

Marion County

Brown, John A., Hamilton, Alabama, Transfer to Nonmember

Fuson, Edna P., Jacksonville, Alabama, Transfer to Nonmember

Fuson, Vernon R., Tallassee, Alabama, Transfer to Nonmember

AROUND THE STATE

Hanford, John R., Hamilton, Alabama,
Transfer to Nonmember

Marshall County

Tucker, Alex L., Albertville, Alabama,
Moved from State

Mobile County

Boger, Robert M., Mobile, Alabama, Moved
from State

Flynn, Edward J., Jr., Mobile, Alabama,
Moved from State

Newton, Philip T., Jr., Mobile, Alabama,
Moved from State

Wingard, Christian, Jr., Mobile, Alabama,
Transfer to Nonmember

Tuscaloosa County

Brahen, Louis, Tuscaloosa, Alabama, Moved
from State

Ford, Robert L., Tuscaloosa, Alabama, Moved
from State

Fowler, Inez, Fayette, Alabama, Transfer to
Nonmember

Sneed, David G., Tuscaloosa, Alabama,
Moved from State

Committees Of The Association 1973-1974

Alabama Hospital-Medical Council (Liaison Committee to Alabama Nursing Association)

(Liaison Committee to Alabama Nursing
Association)

John M. Akin, Jr., Chairman,
Birmingham 1978
Ira B. Patton, Oneonta 1974
R. L. Draughon, Jr., Montgomery 1975
John A. Lyden, Jr., Mobile 1976
Harold R. Wells, Fairfield 1977

Allied Medical Services

W. F. Little, Jr., Chairman, Montgomery 1978
W. J. Tally, Gadsden 1974
S. S. Romendick, Mobile 1975
T. W. Wright, Huntsville 1976
J. D. Elmore, Birmingham 1976
W. J. Atkinson, Jr., Mobile 1977
S. O. Moseley, Jr., Selma 1977
J. K. Ward, Birmingham 1978
Maxwell Moody, Jr., Tuscaloosa 1978

Constitution and Bylaws

E. B. Glenn, Chairman, Birmingham 1975
J. R. Moore, Mobile 1978
Ellis F. Porch, Arab 1974

M. B. Peeler, Huntsville 1976
R. E. Brown, Montgomery 1977

(The Chairman of the Board of Censors and
the Secretary are ex officio members.)

Grievance

E. L. McCafferty, Jr., Chairman, Mobile 1974
F. M. Phillippi, Jr., Brewton 1978
C. Kermit Pitt, Decatur 1975
O. Emfinger, Union Springs 1976
A. E. Thomas, Montgomery 1977

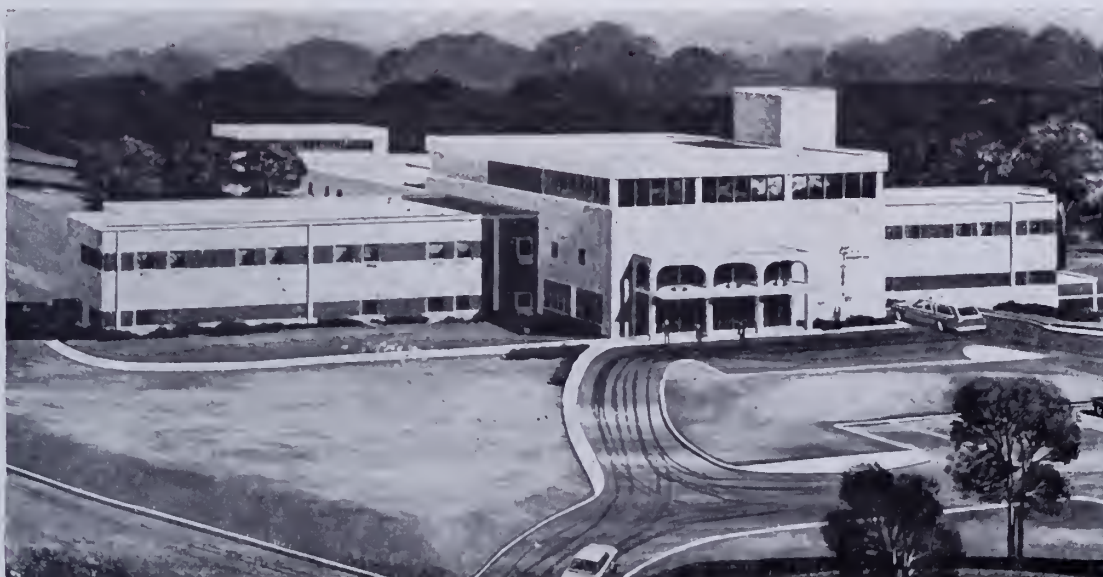
Insurance

N. E. Cowart, Chairman, Huntsville 1977
B. M. Carraway, Birmingham 1974
D. E. Dunn, Jr., Montgomery 1975
James M. Morgan, Jr., Birmingham 1976
Jack Hyman, Mobile 1978

Legislation

T. C. Nolan, Chairman, Montgomery 1976
M. B. Pitt, Decatur 1974
J. E. Kimbrough, Grove Hill 1974
M. V. McLaughlin, Mobile 1974
C. L. Butler, Huntsville 1975

(Continued on Page 876)



Hill Crest HOSPITAL

For Intensive Treatment of Psychiatric Disorders

This 113-bed non-governmental psychiatric hospital provides modern facilities for diagnosis and treatment of patients with all degrees of illness, including those who show severely disturbed behavior. Alcoholic and drug abuse patients are also accepted.

In addition to care by psychiatrists and by consultants in all medical specialties, the treatment program includes occupational, recreational, and physical therapy, social services, and tutoring. Emphasis is on short-term, intensive treatment of voluntary patients.

Hill Crest is a member of: American Hospital Association, National Association of Private Psychiatric Hospital, Alabama Hospital Association, Birmingham Regional Hospital Council.

Accredited by Joint Commission on Accreditation of Hospitals. Medicare Approved. Blue Cross Participating Hospital.

PSYCHIATRISTS:

James K. Ward, M. D.
Hardin M. Ritchey, M. D.
F. Joseph Nuckols, M. D.
James A. Greene, M. D.
Charles W. Moorefield, M. D.

ADMINISTRATOR:

Robert V. Sanders

DIRECTOR OF SOCIAL SERVICES:

James T. Kemp, A. C. S. W.

HILL CREST HOSPITAL

Hill Crest Foundation, Inc.

6869 Fifth Avenue South

Birmingham, Alabama 35212

PHONE: 205-836-7201

AROUND THE STATE

(Continued from Page 874)

C. H. Lupton, Jr., Birmingham	1976
J. O. Colley, Jr., Troy	1977
G. F. Monzingo, Brewton	1977
Julius Michaelson, Foley	1978
T. N. Kirkland, Birmingham	1978
Felix Tankersley, Montgomery	1978

(The President, President-Elect, Secretary, Executive Director of the Association and the State Health Officer are ex officio members.)

Maternal and Child Health

G. E. Cassady, Chairman, Birmingham	1975
H. J. Wiseman, Mobile	1974
J. F. Garner, Dothan	1976
J. D. Dillard, Selma	1977
W. A. Walker, Decatur	1977
F. M. Tankersley, Montgomery	1978

(The State Health Officer is an ex officio member.)

Medical Aspects of Sports

B. L. Landers, Jr., Chairman, Birmingham	1975
E. C. Whitley, Jr., Decatur	1974
C. E. Selah, Huntsville	1975
J. S. Hamilton, Decatur	1976
E. F. Porch, Arab	1977
M. V. Parker, Montgomery	1977
K. M. Hannon, Mobile	1978

Medical Aspects of Traffic Safety

J. C. Upchurch, Chairman, Birmingham	1978
R. R. Smith, Brewton	1974
Martin Perlman, Mobile	1975
Joseph M. Dixon, Birmingham	1976
John K. Lingo, Mobile	1976
C. F. Veazey, Guntersville	1977
J. E. Robertson, Huntsville	1977

Medical Education

Margaret S. Klapper, Chairman, Birmingham	1978
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(Continued on Page 879)

PRESCRIBING INFORMATION Antiminth (pyrantel pamoate) Oral Suspension

Actions. Antiminth (pyrantel pamoate) has demonstrated anthelmintic activity against *Enterobius vermicularis* (pinworm) and *Ascaris lumbricoides* (roundworm). The anthelmintic action is probably due to the neuromuscular blocking property of the drug.

Antiminth is partially absorbed after an oral dose. Plasma levels of unchanged drug are low. Peak levels (0.05-0.13 µg/ml.) are reached in 1-3 hours. Quantities greater than 50% of administered drug are excreted in feces as the unchanged form, whereas only 7% or less of the dose is found in urine as the unchanged form of the drug and its metabolites.

Indications. For the treatment of ascariasis (roundworm infection) and enterobiasis (pinworm infection).

Warnings. Usage in Pregnancy: Reproduction studies have been performed in animals and there was no evidence of propensity for harm to the fetus. The relevance to the human is not known.

There is no experience in pregnant women who have received this drug.

Precautions. Minor transient elevations of SGOT have occurred in a small percentage of patients. Therefore, this drug should be used with caution in patients with pre-existing liver dysfunction.

Adverse Reactions. The most frequently encountered adverse reactions are related to the gastrointestinal system.

Gastrointestinal and hepatic reactions: anorexia, nausea, vomiting, gastralgia, abdominal cramps, diarrhea and tenesmus, transient elevation of SGOT.

CNS reactions: headache, dizziness, drowsiness, and insomnia. Skin reactions: rashes.

Dosage and Administration. *Children and Adults:* Antiminth Oral Suspension (50 mg. of pyrantel base/ml.) should be administered in a single dose of 11 mg. of pyrantel base per kg. of body weight (or 5 mg./lb.); maximum total dose 1 gram. This corresponds to a simplified dosage regimen of 1 cc. of Antiminth per 10 lb. of body weight. (One teaspoonful = 5 cc.)

Antiminth (pyrantel pamoate) Oral Suspension may be administered without regard to ingestion of food or time of day; and purging is not necessary prior to, during, or after therapy. It may be taken with milk or fruit juices. Because of limited data on repeated doses, no recommendations can be made.

How Supplied. Antiminth is available as a pleasant tasting caramel-flavored suspension which contains the equivalent of 50 mg. pyrantel base per ml., supplied in 60 cc. bottles.

ROERIG 

A Division of Pfizer Pharmaceuticals
New York, New York 10017

Clean Sweep



with a single dose of Antiminth

(pyrantel pamoate) ORAL SUSPENSION

Highly effective against
pinworm and roundworm

Non-staining to teeth
or oral mucosa on ingestion, to
stools, clothing, linen

Simple dosage with a
single-dose regimen: 1 cc. per
10-lb. body weight (1 tsp./50 lb.;
maximum dose, 4 tsp.)

Well-tolerated, based on
clinical studies*

Pleasant-tasting, easy-to-
take, caramel-flavored oral
suspension

Economical, because one
prescription can treat the entire
family

ROERIG *Pfizer*

A division of Pfizer Pharmaceuticals
New York, New York 10017

ANTIMINTH®

(pyrantel pamoate)

equivalent to 50 mg. pyrantel/ml.

ORAL SUSPENSION

While Antiminth is highly effective against pinworms and roundworms, the illustration is not meant to imply 100% efficacy.
*Data on file at Roerig. Please see prescribing information on facing page.

Now form follows function

Only **Candeptin** (candicidin) gives you this unique form... a soft gelatin capsule—highly effective therapy for all your vaginal moniliasis patients

CANDEPTIN® (candicidin) VAGELETTES™ Vaginal Capsules... a unique dosage form... anatomically and therapeutically designed to extend flexibility in the treatment of vaginal moniliasis.

Virtually unlimited application

CANDEPTIN VAGELETTES Vaginal Capsules provide the specific high potency antimicrobial agent, candicidin, in a soft gelatin capsule—the shape designed with your patient in mind. It permits easy manual insertion without the need for an applicator or inserter... of particular value for the pregnant patient... for *intravaginal use*. By cutting off the tip of the narrow soft end, the contents can be extruded through an intact hymen for *intravaginal use*. And it is readily adaptable to *topical application* for labial involvement, and/or *intravaginal use* to treat mucosal infection.

CANDEPTIN (candicidin) provides:

Rapid results

Prompt, symptomatic relief—itching, burning, and discharge subside in 48-72 hours!
Soothing, miscible ointment permits complete contact with affected tissue.
Usually cures in a single 14-day course of therapy.^{2,3,4}

Safe

Exact dosage assured.^{2,3}
No side effects, clinical reports of irritation or sensitization extremely rare.

Convenience

Easy to use intravaginally and/or topically for labial involvement.
Encourages patient acceptance and cooperation.
Therapy is easy to start in your office.

Clinical proof of potency

CANDEPTIN (candicidin) is significantly more potent *in vitro* than nystatin.⁵ CANDEPTIN Vaginal Ointment and Tablets have a clinical record of cure rates of 90% and more in pregnant and non-pregnant patients.^{1,4,6} In recent studies on CANDEPTIN VAGELETTES Vaginal Capsules, involving both gravid and non-gravid patients, a 100% culture-confirmed cure rate was achieved with a single 14-day course of therapy.^{2,3}

Unique

**CANDEPTIN® (candicidin)
VAGELETTES™ Vaginal Capsule**



Description: CANDEPTIN (candicidin) Vaginal Ointment contains a dispersion of candicidin powder equivalent to 0.6 mg. per gm. or 0.06% Candicidin activity in U.S.P. petrolatum. 3 mg. of Candicidin is contained in 5 gm. of ointment or one applicatorful. CANDEPTIN Vaginal Tablets contain Candicidin powder equivalent to 3 mg. (0.3%) Candicidin activity dispersed in starch, lactose and magnesium stearate. CANDEPTIN VAGELETES Vaginal Capsules contain 3 mg. of Candicidin activity dispersed in 5 gm. U.S.P. petrolatum.

Action: CANDEPTIN Vaginal Ointment, Vaginal Tablets, and VAGELETES Vaginal Capsules possess anti-monomial activity.

Indications: Vaginitis due to *Candida albicans* and other *Candida* species.

Contraindications: Contraindicated for patients known to be sensitive to any of its components. During pregnancy manual Tablet or VAGELETES Capsule insertion may be preferred since the use of the ointment applicator or tablet inserter may be contraindicated.

Caution: During treatment it is recommended that the patient refrain from sexual intercourse or the husband wear a condom to avoid re-infection.

Adverse Reaction: Clinical reports of sensitization or temporary irritation with CANDEPTIN Vaginal Ointment, Vaginal Tablets or VAGELETES Vaginal Capsules have been extremely rare.


Dosage: One vaginal applicatorful of CANDEPTIN Ointment or one Vaginal Tablet or one VAGELETES Vaginal Capsule is inserted high in the vagina twice a day, in the morning and at bedtime, for 14 days. Treatment may be repeated if symptoms persist or reappear.

Available Dosage Forms: CANDEPTIN Vaginal Ointment is supplied in 75 gm. tubes with applicator (14-day regimen requires 2 tubes). CANDEPTIN Vaginal Tablets are packaged in boxes of 28, in foil with inserter—enough for a full course of treatment. CANDEPTIN VAGELETES Vaginal Capsules are packaged in boxes of 14 (14-day regimen requires 2 boxes.)

Store under refrigeration to insure full potency.

Federal law prohibits dispensing without prescription.

References: 1. Olsen, J.R.: *Journal-Lancet* 85:287 (July) 1965. 2. Giorlando, S.W.: *Ob/Gyn Dig.* 13:32 (Sept.) 1971. 3. Decker, A.: Case Reports on File, Medical Department, Julius Schmid. 4. Giorlando, S.W., Torres, J.F., and Musillo, G.: *Am. J. Obst. & Gynec.* 90:370 (Oct. 1) 1964. 5. Lechevalier, H.: *Antibiotics Annual 1959-1960*. New York, Antibiotics Inc., 1960, pp. 614-618. 6. Friedel, H.J.: *Maryland M.J.*, 15:36 (Feb.) 1966.

 **Julius Schmid Pharmaceuticals**
423 West 55th Street
New York, New York 10019

CANDEPTIN® (candicidin)

Vaginal Tablets

Vaginal Ointment

and VAGELETES™ Vaginal Capsules

(Continued from Page 876)

R. O. Rutland, Jr., Fayette	1974
H. H. Henderson, Jr., Birmingham	1974
J. F. Burnum, Tuscaloosa	1975
W. D. Lazenby, Opelika	1975
R. L. Dorrough, Montgomery	1973
T. B. Woods, Jr., Dothan	1973
J. M. McGehee, Mobile	1977
L. C. Hamilton, Fairhope	1977
J. W. Denson, Gadsden	1978

Medicine and Religion

A. A. Stamler, Chairman, Decatur	1974
Pat Hamm, Huntsville	1974
S. P. Marshall, Mobile	1975
R. H. Rhyne, Jr., Moulton	1975
R. L. Dorrough, Montgomery	1975
T. W. Mears, Birmingham	1975
F. O. Sherrill, Jr., Falkville	1976
D. P. Hightower, York	1976
C. L. Putzel, Selma	1976
Quintus Langstaff, Florence	1976
J. E. Pittman, Enterprise	1977
P.W. Petcher, Chatom	1978

Community Affairs

A. M. Brown, Chairman, Gadsden	1977
W. W. Yeagan, Tuscaloosa	1974
D. A. White, Jr., Birmingham	1974
Jolly McKenzie, Decatur	1974
L. D. McLaughlin, Ozark	1975
H. C. Mullins, Jr., Fairhope	1975
H. J. Till, Montgomery	1976
H. M. Pewitt, Huntsville	1976
J. C. Sullivan, Montgomery	1978
T. L. Pritchett, Jr., Sheffield	1978

(The President, President-Elect and Executive Director are ex officio members.)

Rural Health

W. A. Edwards, Chairman, Wetumpka	1975
A. C. Collins, Scottsboro	1974
D. S. Tysinger, Jr., Dothan	1976
J. D. Rayfield, Sylacauga	1977
C. H. Merryman, New Market	1978

Socio-Economics

A. E. Terry, Chairman, Russellville	1975
W. W. Irwin, Moulton	1974
W. A. Daniel, Jr., Birmingham	1974
F. M. Cauthen, Athens	1975
R. P. Griffin, Fort Deposit	1976
Harry Glazer, Montgomery	1976
E. R. Johnston, Birmingham	1977
J. M. Slaughter, Fairfield	1977
T. M. Nolen, Gadsden	1978
W. H. Tucker, Mobile	1978

Miscellaneous Committees

Physicians Advisory Board To Medical College Of Alabama

J. M. Chenault, Chairman, Decatur	July 28, 1973
J. G. Donald, Mobile	July 28, 1974
P. W. Burleson, Birmingham	July 28, 1975
J. W. Denson, Gadsden	July 28, 1976
W. D. Anderson, Tuscaloosa	July 28, 1977
(The Dean of the University of Alabama School of Medicine is an ex officio member.)	

(Nominated by the Board of Censors and
elected by University of Alabama Board of
Trustees under Code of Alabama Title 52,
Section 509)

Hospital Service For Indigent Advisory Board

H. H. Hutchinson, Montgomery	January 20, 1975
J. J. Kirschenfeld, Montgomery	January 20, 1975
(Nominated by Board of Censors)	

Hospital Licensure Advisory Board

E. Bryce Robinson, Jr., Fairfield	October 8, 1974
M. C. Holcomb, Jr., Birmingham	February 21, 1975
(Nominated by Board of Censors—Appointed by the Governor)	

(Continued on Page 883)

Rondomycin®

(methacycline HCl)

CONTRAINDICATIONS: Hypersensitivity to any of the tetracyclines.

WARNINGS: Tetracycline usage during tooth development (last half of pregnancy to eight years) may cause permanent tooth discoloration (yellow-gray-brown), which is more common during long-term use but has occurred after repeated short-term courses. Enamel hypoplasia has also been reported. **Tetracyclines should not be used in this age group unless other drugs are not likely to be effective or are contraindicated.** **Usage in pregnancy.** (See above **WARNINGS** about use during tooth development.)

Animal studies indicate that tetracyclines cross the placenta and can be toxic to the developing fetus (often related to retardation of skeletal development). Embryotoxicity has also been noted in animals treated early in pregnancy. **Usage in newborns, infants, and children.** (See above **WARNINGS** about use during tooth development.)

All tetracyclines form a stable calcium complex in any bone-forming tissue. A decrease in fibula growth rate observed in premature given oral tetracycline 25 mg/kg every 6 hours was reversible when drug was discontinued.

Tetracyclines are present in milk of lactating women taking tetracyclines.

To avoid excess systemic accumulation and liver toxicity in patients with impaired renal function, reduce usual total dosage and, if therapy is prolonged, consider serum level determinations of drug. The antianabolic action of tetracyclines may increase BUN. While not a problem in normal renal function, in patients with significantly impaired function, higher tetracycline serum levels may lead to azotemia, hyperphosphatemia, and acidosis.

Photosensitivity manifested by exaggerated sunburn reaction has occurred with tetracyclines. Patients apt to be exposed to direct sunlight or ultraviolet light should be so advised, and treatment should be discontinued at first evidence of skin erythema. **PRECAUTIONS:** If superinfection occurs due to overgrowth of nonsusceptible organisms, including fungi, discontinue antibiotic and start appropriate therapy.

In venereal diseases, when coexistent syphilis is suspected, perform darkfield examination before therapy, and serologically test for syphilis monthly for at least four months.

Tetracyclines have been shown to depress plasma prothrombin activity; patients on anticoagulant therapy may require downward adjustment of their anticoagulant dosage.

In long-term therapy, perform periodic organ system evaluations (including blood, renal, hepatic).

Treat all Group A beta-hemolytic streptococcal infections for at least 10 days.

Since bacteriostatic drugs may interfere with the bactericidal action of penicillin, avoid giving tetracycline with penicillin.

ADVERSE REACTIONS: Gastrointestinal (oral and parenteral forms): anorexia, nausea, vomiting, diarrhea, glossitis, dysphagia, enterocolitis inflammatory lesions (with monilial overgrowth) in the anogenital region.

Skin: maculopapular and erythematous rashes; exfoliative dermatitis (uncommon). Photosensitivity is discussed above (See **WARNINGS**).

Renal toxicity: rise in BUN, apparently dose related (See **WARNINGS**).

Hypersensitivity: urticaria, angioneurotic edema, anaphylaxis, anaphylactoid purpura, pericarditis, exacerbation of systemic lupus erythematosus.

Bulging fontanels, reported in young infants after full therapeutic dosage, have disappeared rapidly when drug was discontinued.

Blood: hemolytic anemia, thrombocytopenia, neutropenia, eosinophilia.

Over prolonged periods, tetracyclines have been reported to produce brown-black microscopic discoloration of thyroid glands; no abnormalities of thyroid function studies are known to occur.

USUAL DOSAGE: Adults—600 mg daily, divided into two or four equally spaced doses. More severe infections: an initial dose of 300 mg followed by 150 mg every six hours or 300 mg every 12 hours. Gonorrhea: In uncomplicated gonorrhea, when penicillin is contraindicated, 'Rondomycin' (methacycline HCl) may be used for treating both males and females in the following clinical dosage schedule: 900 mg initially, followed by 300 mg q.i.d. for a total of 5.4 grams.

For treatment of syphilis, when penicillin is contraindicated, a total of 18 to 24 grams of 'Rondomycin' (methacycline HCl) in equally divided doses over a period of 10-15 days should be given. Close follow-up, including laboratory tests, is recommended.

Eaton Agent pneumonia: 900 mg daily for six days.

Children—3 to 6 mg/lb/day divided into two to four equally spaced doses.

Therapy should be continued for at least 24-48 hours after symptoms and fever have subsided.

Concomitant therapy: Antacids containing aluminum, calcium or magnesium impair absorption and are contraindicated. Food and some dairy products also interfere. Give drug one hour before or two hours after meals. Pediatric oral dosage forms should not be given with milk formulas and should be given at least one hour prior to feeding.

In patients with renal impairment (see **WARNINGS**), total dosage should be decreased by reducing recommended individual doses or by extending time intervals between doses.

In streptococcal infections, a therapeutic dose should be given for at least 10 days.

SUPPLIED: 'Rondomycin' (methacycline HCl) 150 mg and 300 mg capsules, syrup containing 75 mg/5 cc methacycline HCl.

Before prescribing, consult package circular or latest PDR information.

Rev. 12/71



WALLACE PHARMACEUTICALS
CRANBURY, NEW JERSEY 08512



**When the focus is on bronchitis due to
susceptible strains of *H. influenzae* and pneumococci***

Randomycin[®] 300 mg.
[methacycline HCl] Capsules

Delivers from the very first dose:

**Studies show that after the first dose serum levels rapidly rise above
minimum *in vitro* inhibitory concentrations**

*Since many strains are known to be resistant, routine sensitivity testing is recommended.

The Rx that says "Relax"

BUTISOL Sodium provides highly predictable sedative effect: minor dosage adjustments are usually all that's needed to produce the desired degree of sedation. (With 3 dosage forms and 4 strengths to make adjustments easy.)

BUTISOL Sodium offers prompt, smooth, relatively non-cumulative action: begins to work within 30 minutes...yet, because of its intermediate rate of metabolism, generally has neither a "roller-coaster" nor a "hangover" effect.

BUTISOL Sodium is remarkably well tolerated: a 30-year safety record assures you that there is little likelihood of unexpected reactions.

BUTISOL Sodium saves your patients money: costs less than half as much as most commonly prescribed sedative tranquilizers.*

These are four good reasons for prescribing BUTISOL Sodium for the many patients who need to have the pace set just a little slower. Its gentle daytime sedative action is often all that's needed to help the usually well-adjusted patient cope with temporary stress.

*Based on surveys of average daily prescription costs.



Butisol SODIUM[®]
(SODIUM BUTABARBITAL)

Contraindications: Porphyria, sensitivity to barbiturates, or susceptibility to dependence on sedative-hypnotics. **Warning:** May be habit forming. **Precautions:** Exercise caution in: moderate to severe hepatic disease; withdrawal in drug dependence or the taking of excessive doses over a long period, to avoid withdrawal symptoms; elderly or debilitated patients, to avoid possible marked excitement or depression; use with alcohol or other CNS depressants because of combined effects. **Adverse Reactions:** Drowsiness at daytime sedative dose levels, skin rashes, "hangover" and gastrointestinal disturbances are seldom seen. **Usual Adult Dosage:** For daytime sedation, 15 mg. to 30 mg. t.i.d. or q.i.d. For hypnosis, 50 mg. to 100 mg. **Available as:** Tablets, 15 mg., 30 mg., 50 mg., 100 mg.; Elixir, 30 mg. / 5 cc. (alcohol 7%); BUTICAPS[®] (Capsules BUTISOL SODIUM (sodium butabarbital)) 15 mg., 30 mg., 50 mg., 100 mg.

McNEIL

McNeil Laboratories, Inc., Fort Washington, Pa. 19034

(Continued from Page 880)

Interspecialty Council

William Tally, Chairman	Gadsden
Alabama Thoracic Society	
G. C. Murchison	Montgomery
Alabama Chapter, American Academy of Family Physicians	
J. R. Eubanks, Jr.	Mobile
Alabama Society of Anesthesiologists	
Hugh Praytor	Montgomery
Alabama Dermatological Society	
T. N. Kirkland	Birmingham
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J. A. Lyons, Jr.	Decatur
Alabama Academy of Otolaryngology	
J. G. Kimbrough	Montgomery
Alabama Radiological Society	
J. M. Cameron	Montgomery
Alabama Chapter, American College of Surgeons	
J. B. Beaird, Jr.	Montgomery
Alabama Association of Pathologists	
D. E. Barlow	Sylacauga
Alabama Association of Obstetricians and Gynecologists	
J. M. Humphries	Birmingham
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A. A. Shugerman	Birmingham
Alabama Society of Internal Medicine	
E. C. Harris, Jr.	Mobile
Alabama Orthopaedic Society	
H. Dale Brown	Birmingham
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G. S. Peters	Montgomery
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Alabama Diabetes Association	
John Packard	Birmingham
University of Alabama School of Medicine	
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F. S. Wolf	Montgomery
State Department of Public Health	

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Alabama Urology Society	
J. H. French	Montgomery
Alabama Section, American College of Obstetricians and Gynecologists	

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F. M. Phillippi, Jr.	Brewton
John M. Chenault	Decatur
George Hansberry	Decatur
G. L. Wideman	Birmingham

Relative Value Index

W. B. Crum, Chairman, Montgomery	1977
J. E. Robertson, Huntsville	1974
E. V. Scott, Birmingham	1974
J. E. Poteet, Montgomery	1975
R. O. Harris, III, Mobile	1975
M. C. Holcomb, Jr., Birmingham	1976
O. M. Otts, Jr., Mobile	1976
D. L. McCall, Selma	1977
J. H. Hollingsworth, Tuscaloosa	1977
J. E. Welden, Birmingham	1978

Representatives To Blue Cross-Blue Shield

(Terms expires March 1 of Year shown)

E. E. Camp, Huntsville	1974
James A. Davis, Jr., Birmingham	1974
H. G. Hodo, Jr., Fayette	1975
R. H. Mudd, Mobile	1975
J. D. Bush, Jr., Gadsden	1976
J. M. Cameron, Montgomery	1976
E. L. Strandell, Brewton	1977
W. Harold Avant, Mobile	1977

I never saw an instance of one or two disputants convincing the other by argument . . . Conviction is the effect of our own dispassionate reasoning, either in solitude or weighing within ourselves, what we hear from others. One of the rules which made Dr. Franklin the most amiable of men in society was never to contradict anybody.

—Thomas Jefferson

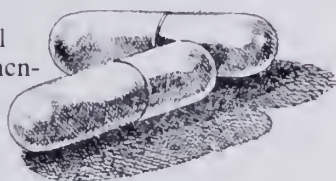
**Because you
practice
medicine in the
Cotton State...**



You carry one of the heaviest patient loads in the country. Since this may include a number of patients with gastritis and duodenitis... you should know more about Librax®

Helps reduce anxiety-related G.I. symptoms

A patient may blame his attacks of gastritis or duodenitis on "something he ate" but contributing factors may be his job, marital problems, financial worries or some other unmentioned source of stress and excessive anxiety that exacerbated the condition. Whether it is "something he ate" or "something eating him," adjunctive Librax can help. Librax offers both the antianxiety action of Librium® (chlordiazepoxide HCl), that can help relieve excessive anxiety, and the dependable anticholinergic action of Quarzan® (clidinium Br), that can help reduce gastrointestinal hypermotility and hypersecretion.



Patient-oriented dosage — up to 8 capsules daily in divided doses

For optimal response, dosage can be adjusted to suit patient needs—1 or 2 capsules, 3 or 4 times a day.

To help relieve anxiety-linked symptoms in gastritis and duodenitis adjunctive Librax®



Each capsule contains 5 mg chlordiazepoxide HCl and 2.5 mg clidinium Br.

Before prescribing, please consult complete product information, a summary of which follows:

Contraindications: Patients with glaucoma; prostatic hypertrophy and benign bladder neck obstruction; known hypersensitivity to chlordiazepoxide hydrochloride and/or clidinium bromide.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering Librium (chlordiazepoxide hydrochloride) to known addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards. As with all anticholinergic drugs, an inhibiting effect on lactation may occur.

Precautions: In elderly and debilitated, limit dosage to smallest effective amount to preclude development of ataxia, oversedation or confusion (not more than two capsules per day initially; increase gradually as needed and tolerated). Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients. Employ usual precautions

in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: No side effects or manifestations not seen with either compound alone have been reported with Librax. When chlordiazepoxide hydrochloride is used alone, drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally with chlordiazepoxide hydrochloride, making periodic blood counts and liver function tests advisable during protracted therapy. Adverse effects reported with Librax are typical of anticholinergic agents, *i.e.*, dryness of mouth, blurring of vision, urinary hesitancy and constipation. Constipation has occurred most often when Librax therapy is combined with other spasmolytics and/or low residue diets.



Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Medical & Health Care For All, A Summary of Medigredit

It is a basic right of every citizen to have available to him adequate health care; it is a basic right of every citizen to have a free choice of physician and institution . . . ; the medical profession, using all means at its disposal, should endeavor to make good medical care available to each person . . .

Health care for the poor should not be disassociated from, but rather should be a vital part of, the over-all health care system.

*Policy adopted by the
House of Delegates
American Medical Association
December, 1969*

Why National Health Insurance?

The policy statement on the opposite page affirms the American Medical Association's long-standing conviction that no citizen of this nation should lack adequate medical and health care because of economic, social or any other reasons.

Therefore, any national health insurance program should protect the poor and the disadvantaged. The AMA also recognizes that the costs of modern medicine are such that even persons of moderate to good income can be left economically drained after a long and serious illness.

The answer is to make sure that high quality medical and health care are available to every person by removing economic barriers that already exist for the poor, and that can quickly be erected against others by just one catastrophic illness.

Such is the purpose of the national health insurance act proposed by the AMA. Titled

the "Health Care Insurance Act of 1973," it is more commonly called "Medigredit."

Summary of Medigredit

Medigredit is a program to give every person in America under the age of 65 equal access to high quality medical and health care regardless of ability to pay.

Without disturbing the present Medicare program for the elderly, but replacing Medicaid for the poor and near-poor, it makes available to everyone under 65 a private program of comprehensive medical and health care protection, covering both the ordinary and the catastrophic expenses of illness or accident.

The protection may be in the form of a health insurance policy from a company; membership in a prepayment plan such as Blue Cross-Blue Shield; or membership in a prepaid group practice plan (in which the patient pays a fixed fee per month or year and receives medical and health care as needed from physicians practicing in that group). Choice of the kind of protection desired is made by the family or individual.

All programs offered under Medigredit will be approved by the respective states to assure that benefits meet the national standards.

For persons of low income who are unable to buy protection for themselves and their dependents, the federal government will pay the total cost of the premium or membership.

For persons whose income is higher, the federal contribution is reduced along a specified sliding scale. As income rises, the federal contribution diminishes.

Some things Medigredit does not do:

It does not require restructuring the entire health care system, which provides excellent care for the vast majority of Americans. Some of the other programs before Congress would dismantle what now exists and rebuild it along untried lines—potentially a hazardous and expensive proposition.

Medicredit also does not force patients—or physicians—into any one particular type of health care policy, program or plan. Instead, it fosters flexibility and innovation in developing new, more efficient ways to take care of people. It permits free choice of physician by every patient, and free choice by every physician as to how he will conduct his practice.

Finally, Medicredit does not obligate the government—the nation's taxpayers—to pay for care of people who can afford to handle most of their medical problems themselves.

Details of Medicredit

PROTECTION OFFERED

The approved protection (whether insurance policy or membership plan) must provide payment of expenses for care in a hospital as much as 365 days a year (or in a skilled nursing care facility for some of those days). This would be provided under Basic and Catastrophic coverage for the full range of health care needs.

Specific benefits are categorized and listed below:

BASIC COVERAGE

Inpatient care: In a hospital or skilled nursing care facility for 60 days during a 12-month policy period, in a semi-private room. Within the 60-day limit, two days in a skilled nursing care facility count as only one day.

Inpatient hospital services cover all care customarily provided, including bed, board and nursing services; drugs and oxygen; blood and plasma (after the first three

pints); biologicals and supplies; appliances and equipment furnished by the hospital; surgery or delivery room; recovery room; intensive care or coronary care unit; rehabilitation unit; care for pregnancy or any of its complications; and psychiatric care.

Inpatient skilled nursing care facility services cover all care customarily provided in such facilities, including bed, board and nursing services; physical, occupational or speech therapy; and drugs, biologicals, supplies, appliances and equipment furnished by the facility.

Outpatient or emergency care: The policy or plan covers all care customarily provided as outpatient or emergency care, including diagnostic services—X-rays, electrocardiograms, laboratory tests and other diagnostic tests; use of operating, cystoscopic and cast rooms and their supplies; and use of the emergency room and supplies.

Home health care: Includes all items and services provided on a visiting basis in the home of a patient who is under the care of a physician. Benefits include part-time or intermittent home nursing care supervised by a registered nurse; physical, occupational or speech therapy; medical supplies (other than drugs and biologicals); and use of medical appliances.

Ambulance services are also covered.

Medical care: The policy or plan covers expenses of all medical services—preventive, diagnostic or therapeutic—provided or ordered by a Doctor of Medicine or Doctor of Osteopathy, whether in a hospital, a skilled nursing care facility, the physician's office, the patient's home, or elsewhere.

These medical services include diagnosis or treatment of illness or injury; psychiatric care; well-baby care; inoculations and immunizations of infants and adults; physical examinations; diagnostic X-ray and laboratory services; radiation therapy; consulta-

(Continued on Page 894)

Pinworm therapy is often a family affair



Contraindications: History of hypersensitivity to thiabendazole.

Warnings: If hypersensitivity reactions occur, drug should be discontinued immediately and not resumed. Rarely, erythema multiforme has been associated with thiabendazole therapy; in severe cases (Stevens-Johnson syndrome), fatalities have occurred. Because CNS side effects may occur quite frequently, activities requiring mental alertness should be avoided. Safe use in pregnancy or lactation has not been established.

Precautions: Ideally, supportive therapy is indicated for anemic, dehydrated, or malnourished patients prior to initiation of anthelmintic therapy. In presence of hepatic or renal dysfunction,

patients should be carefully monitored.

Adverse Reactions: Most frequently encountered are anorexia, nausea, vomiting, and dizziness. Less frequently, diarrhea, epigastric distress, pruritus, weariness, drowsiness, giddiness, and headache have occurred. Rarely, tinnitus, hyperirritability, numbness, abnormal sensation in eyes, blurring of vision, xanthopsia; hypotension, collapse; enuresis; transient rise in cephalin flocculation and SGOT; perianal rash, cholestasis and parenchymal liver damage; hyperglycemia; transient leukopenia; malodor of the urine, crystalluria, hematuria; appearance of live *Ascaris* in the mouth and nose. Hypersensitivity reactions

INDICATION | DOSAGE SCHEDULE

MINTEZOL® (Thiabendazole, MSD) has demonstrated effectiveness against a broad spectrum of nematode infections. Dosages are weight related. For your convenience, the information in the weight-dose chart below is included in the full prescribing information and in the 1973 edition of PDR.

The recommended maximum daily dose of MINTEZOL is 3 g (6 tablets).

MINTEZOL should be given after meals if possible. Dietary restriction, complementary medications, and cleansing enemas are not needed.

The usual dosage schedule for all conditions is two doses per day. The size of the dose is determined by the patient's weight.

Weight-dose chart:

WEIGHT (lb)	EACH DOSE (g)	TABLETS
25	0.25	½
50	0.5	1
75	0.75	1½
100	1.0	2
125	1.25	2½
150 & over	1.5	3

The regimen for each indication follows:

INDICATION	REGIMEN	COMMENTS
Pinworm disease	Two doses per day for 1 day. Repeat in 7 days. This regimen is designed to reduce the risk of reinfection.	If this is not practical, give 2 doses per day for 2 successive days.
Threadworm,* large roundworm,* hookworm,* and whipworm* disease	Two doses per day for 2 successive days.	A single dose of 20 mg/lb or 50 mg/kg may be employed as an alternative schedule, but a higher incidence of side effects should be expected.
Creeping eruption	Two doses per day for 2 successive days.	If active lesions are still present 2 days after completion of therapy, a second course is recommended.
Symptoms of trichinosis* during the invasive phase of the disease	Two doses per day for 2 to 4 successive days according to the response of the patient.	The optimal dosage for the treatment of trichinosis has not been established.

*Clinical experience with thiabendazole for treatment of each of these conditions in children weighing less than 30 lb has been limited.

Chewable Tablets^{500 mg} Mintezol[®] (THIABENDAZOLE | MSD)



so easy to take
everyone in the family
can keep to the
regimen you prescribe

include: fever, facial flush, chills, conjunctival injection, angioedema, anaphylaxis, skin rashes, erythema multiforme (including Stevens-Johnson syndrome), and lymphadenopathy.

Supplied: Chewable tablets, containing 500 mg thiabendazole, in boxes of 36, strip packaged, individually foil wrapped; Suspension, containing 500 mg thiabendazole per 5 ml, in bottles of 120 ml.

For more detailed information, consult your MSD representative or see full prescribing information. Merck Sharp & Dohme, Division of Merck & Co., Inc., West Point, Pa. 19486

What's on your patient's face...

may be more important than
his chief complaint

The lesions on his face may be solar/actinic — so-called “senile” keratoses...and they may be premalignant.

Solar, actinic or senile keratoses

These lesions may be called by several names, but they usually can be identified by the following characteristics: the typical lesion is flat or slightly elevated, of a brownish or reddish color, papular, dry, rough, adherent, and sharply defined. They commonly occur as multiple lesions, chiefly on the exposed portions of the skin.



Patient P.T. seen on 3/29/67 shows typical lesions of moderately severe keratoses. Note residual scarring on ridge of nose from previous cryosurgical and electro-surgical procedures.*

Sequence of therapy/ selectivity of response

After several days of therapy with Efudex® (fluorouracil), erythema may begin to appear in the area of the lesions; the reaction usually reaches its height of unsightliness and discomfort within two weeks, declining after discontinuation of therapy. This reaction occurs in affected areas. Since the response is so predictable, lesions that do not respond should be biopsied.

Acceptable results

Treatment with Efudex provides highly favorable cosmetic results. Incidence of scarring is low. This is particularly important with multiple facial lesions. Efudex should be applied with care near the eyes, nose and mouth.



Patient P.T. seen on 6/12/67, seven weeks after discontinuation of 5%-FU cream. Reaction has subsided. Residual scarring not seen except for that due to prior surgery. Inflammation has cleared and face is clear of keratotic lesions.*

Data on file, Hoffmann-La Roche Inc., Nutley, N.J.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Multiple actinic or solar keratoses.
Contraindications: Patients with known hypersensitivity to any of its components.

Warnings: If occlusive dressing used, may increase inflammatory reactions in adjacent normal skin. Avoid prolonged exposure to ultraviolet rays. Safe use in pregnancy not established.

Precautions: If applied with fingers, wash hands immediately. Apply with care near eyes, nose and mouth. Lesions failing to respond or recurring should be biopsied.

Adverse Reactions: Local — pain, pruritus, hyperpigmentation and burning at application site most frequent; also dermatitis, scarring, soreness and tenderness. Also reported — insomnia, stomatitis, suppuration, scaling, swelling, irritability, medicinal taste, photosensitivity, lacrimation, leukocytosis, thrombocytopenia, toxic granulation and eosinophilia.

Dosage and Administration: Apply sufficient quantity to cover lesion twice daily with non-metal applicator or suitable glove. Usual duration of therapy is 2 to 4 weeks.

How Supplied: Solution, 10-ml drop dispensers — containing 2% or 5% fluorouracil on a weight/weight basis, compounded with propylene glycol, tris(hydroxymethyl)aminomethane, hydroxypropyl cellulose, parabens (methyl and propyl) and disodium edetate.

Cream, 25-Gm tubes — containing 5% fluorouracil in a vanishing cream base consisting of white petrolatum, stearyl alcohol, propylene glycol, polysorbate 60 and parabens (methyl and propyl).

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*INDICATIONS. Based on a review of this drug by the National Academy of Sciences-National Research Council and/or other information, FDA has classified the indications as follows:

Effective: Management of nausea and vomiting and dizziness associated with motion sickness.

Possibly Effective: Management of vertigo associated with diseases affecting the vestibular system.

Final classification of the less than effective indications requires further investigation.

CONTRAINDICATIONS. Administration of Antivert during pregnancy or to women who may become pregnant is contraindicated in view of the teratogenic effect of the drug in rats.

The administration of meclizine to pregnant rats during the 12th-15th day of gestation has produced cleft palate in the offspring. Limited studies using doses of over 100 mg./kg./day in rabbits and 10 mg./kg./day in pigs and monkeys did not show cleft palate. Congeners of meclizine have caused cleft palate in species other than the rat.

Meclizine HCl is contraindicated in individuals who have shown a previous hypersensitivity to it.

WARNINGS. Since drowsiness may, on occasion, occur with use of this drug, patients should be warned of this possibility and cautioned against driving a car or operating dangerous machinery.

Usage in Children: Clinical studies establishing safety and effectiveness in children have not been done; therefore, usage is not recommended in the pediatric age group.

Usage in Pregnancy: See "Contraindications."

ADVERSE REACTIONS. Drowsiness, dry mouth and, on rare occasions, blurred vision have been reported.

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(Continued from Page 887)

tion; services for pregnancy and its complications; and anesthesiology.

Cosmetic surgery (plastic surgery) is excluded except when related to birth defects or burns or scars caused by injury or illness.

Dental care: Provides all services prescribed by a Doctor of Dentistry including preventive, diagnostic, therapeutic, restorative, rehabilitative and emergency services. Applies initially to children aged 2 through 6 years. After first year of Medicredit operation, the age limit will be extended 1 year annually until all children aged 2 through 17 years are also covered.

Orthodontics and cosmetic surgery shall be excluded except when furnished as an adjunct to basic dental coverage.

Emergency dental care will be provided for all persons and includes control of life-threatening oral bleeding; relief of severe pain; injuries to teeth and their supporting tissues; and initial treatment for the elimination of major, acute infection of the oral cavity.

Everyone will also be entitled to oral surgery—surgery related to the jaw or any contiguous structure, or the reduction of any fracture of the jaw or any facial bone.

CATASTROPHIC COVERAGE

After the 60 days of hospital services under basic coverage provisions run out, coverage of hospital expenses continues under the catastrophic benefits provisions. In this way, Medicredit provides unlimited protection for hospital costs. Catastrophic coverage for skilled nursing facility care, however, extends only 30 days beyond the basic coverage of 60 days.

Catastrophic coverage also includes blood and plasma needed for outpatient medical services (after the first three pints), and prosthetic aids ordered by a physician.

Physicians services, emergency and outpatient services, and home health services are not included under catastrophic coverage because *they continue without limit* under basic coverage provisions.

Who Pays For What?

Medicredit is designed to give maximum help to those who need it most, and minimum help to those who are best able to pay their own way. Financial condition is determined solely by the amount of federal income tax a person or family pays whether by withholding or direct payment by the individual when he files his tax return.

LOW-INCOME FAMILIES

If a person or family owes no federal income tax for the year—whether because of no income, low income or number of dependents—the total cost of the basic and catastrophic coverage is paid by the federal government. The family would receive a “certificate of entitlement” which would cover the entire premium or membership cost for an approved program from whatever insurance company or plan the family chooses.

All Others: For families or individuals who pay federal income tax, the formula is a little complicated. The cost of the approved policy or plan is divided into two parts. Most of it is for the basic coverage; a smaller portion is for catastrophic coverage. The insurance company or plan will determine how much is for each.

The federal government pays for the catastrophic coverage for everyone. It pays a percentage of the cost of basic coverage according to the amount of income tax the family or person owes, as follows:

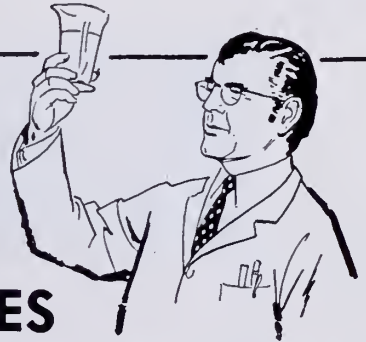
An example shows how the sliding scale would work. A man with a wife and two children who makes \$8,000 a year, taking standard deductions, would owe \$573 in in-

A SUMMARY OF MEDICREDIT

come taxes. That would put him in the 42% Medigredit category (see table).

Income Tax Owed	% Govt Pays	Tax		Tax	
			%		%
\$ 1-10	99%	151-160	84	301-310	69
11-20	98	161-170	83	311-320	68
21-30	97	171-180	82	321-330	67
31-40	96	181-190	81	331-340	66
41-50	95	191-200	80	341-350	65
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Tax	%	Tax	%
671-680	32	801-810	19
681-690	31	811-820	18
691-700	30	821-830	17
701-710	29	831-840	16
711-720	28	841-850	15
721-730	27	851-860	14
731-740	26	861-870	13
741-750	25	871-880	12
751-760	24	881-890	11
761-770	23	891	
771-780	22	and	
781-790	21	Over	10
791-800	20		

Assume that an approved program for his family cost \$700 and that \$650 was for basic coverage and \$50 for catastrophic. His Medigredit benefit would be 100% of the catastrophic premium (which everyone gets) plus 42% of the basic premium (which he is entitled to because of the amount of his income tax).

Consequently: 100% of \$ 50 = \$ 50
 42% of \$650 = \$273
 Total \$323

Of the \$700 for his basic and catastrophic coverage, the government would pay \$323. He would pay only \$377. He could choose a "certificate of entitlement" for the \$323 or could subtract it from the income tax he owed. (In figuring his Medigredit benefit, he also is allowed to count a portion of the money his employer spends to buy his approved program.)

To summarize, here is how to figure the Medigredit benefit:

1. Take 100% of the cost for catastrophic coverage.
2. Find the amount of income tax owed in the table to see what per cent of the basic coverage will be paid by Medigredit.
3. Multiply that per cent by the cost for basic coverage.

4. Add the answers to items 1 and 3.

Deductibles

Any insurance policy, prepayment plan or membership group offering as many benefits as those offered by Medigredit's approved programs must have financial safeguards built in. The safeguards are almost always in the form of deductibles (or "co-insurance")—amounts the patient pays before the program itself begins to meet expenses.

The Medigredit deductibles are small, compared with the benefits, but they serve very important purposes.

Primarily, they keep the total cost of the program lower. Because most citizens will share that cost with the government, economy is an important consideration. If a program paid every dollar of medical and health care expense, the cost would be higher.

Secondly, deductibles—even though small—prevent abuse or over-use of the program by patients or physicians. The policyholder or plan member knows—and so does his physician—that the Medigredit program will give him a great deal of help. But both also know that he must pay a certain amount before receiving its benefits.

So he will not unnecessarily go to a physician "just because it's paid for." Or enter a hospital "just because it's more convenient."

There are deductibles (and copayments) in the basic coverage; a separate deductible in the catastrophic coverage. It is important to note that for the very poor, payment of all deductibles will be made by the states.

BASIC COVERAGE

Under the basic coverage portion of Medigredit's approved programs:

1. The patient pays \$50 per stay in the hospital or a skilled nursing care facility.
2. The family pays 20% of the first \$500

A SUMMARY OF MEDICREDIT

of expenses for outpatient or emergency care, including ambulance service, and home health care (maximum of \$100) in a 12-month period.

3. The family pays 20% of the first \$500 of expenses for medical care services (maximum of \$100) in a 12-month period.
4. The family pays 20% of the first \$500 for dental services (maximum of \$100) in a 12-month period.

For example, a mother takes her child to the eye doctor. The charge for the office call is \$10. Basic coverage pays \$8 and the mother is billed for only \$2. If a visit to a hospital emergency room cost \$27, basic coverage would pay \$21.60 and the patient would be billed for \$5.40.

All money spent by the family on any or all of the basic coverage deductibles then

applies toward satisfying the deductible for catastrophic coverage explained in the next section.

CATASTROPHIC COVERAGE

Persons who need the additional help of catastrophic hospital or skilled nursing facility coverage beyond the 60 days provided under basic coverage, are required to pay a deductible before the catastrophic coverage begins.

This catastrophic deductible is based on the family's taxable income—the amount left over on the income tax form after all deductions and personal exemptions have been taken. The deductible is figured by taking 10% of the taxable income and then reducing it by any deductibles incurred under basic coverage.

As a family's income rose, so would the

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deductible. The family of four in the earlier example, making \$8,000 a year and taking the standard deduction, would have a taxable income of about \$3,800.

In figuring this deductible, start with 10% of \$3,800 or \$380; then deduct from \$380 any deductibles or co-payments incurred by the family under the basic coverage.

For example, if the patient had spent the \$50 deductible for an inpatient hospital stay, the catastrophic coverage deductible would be reduced to \$330. Benefits would begin after services totaling \$330 were incurred. If another \$75 of copayment for medical service had also been paid under basic coverage, the catastrophic deductible would be only \$255 (the \$380 minus \$50 for the deductible and minus \$75 for copayment).

For the low-income family with no taxable income, there would be no catastrophic deductible.

Conclusion: Some Companion Programs

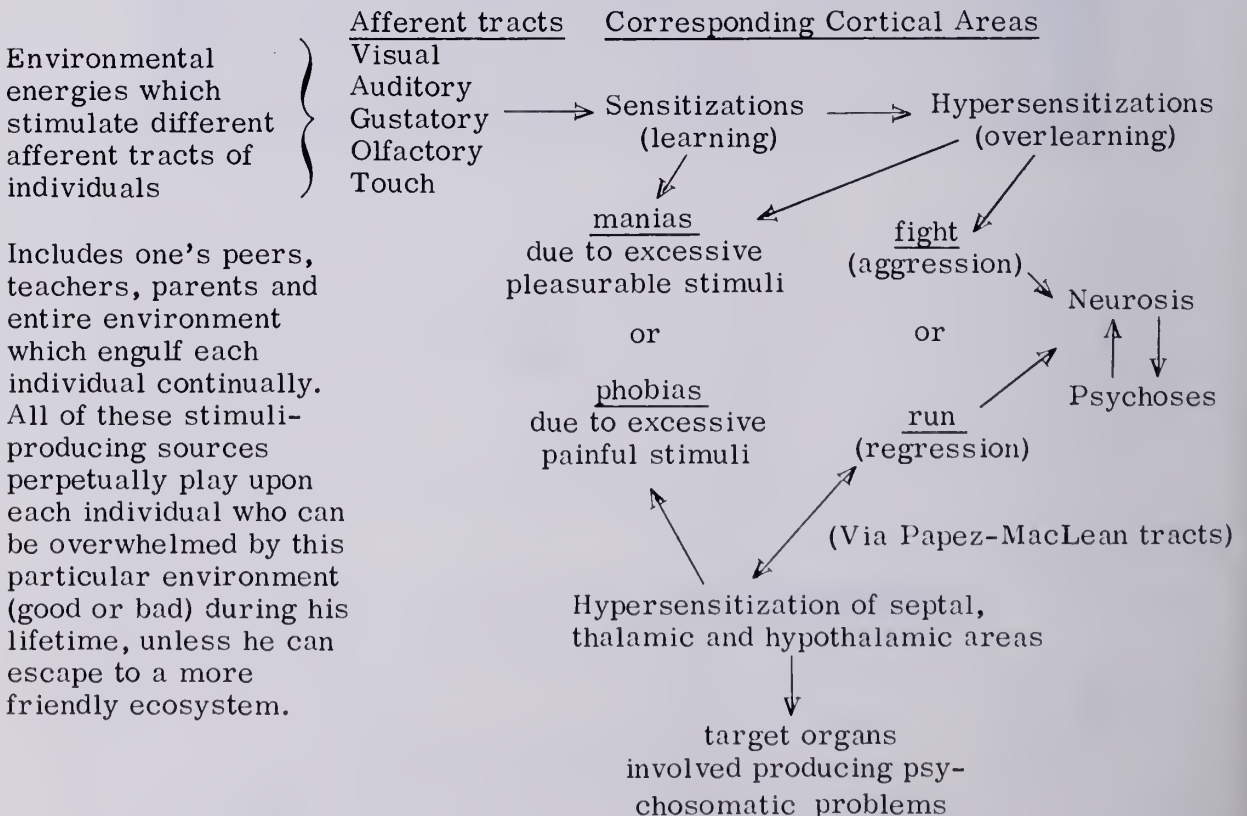
Medicredit was designed to make it possible for everyone to seek needed health care without regard to his ability to pay.

The program will operate with a minimum of red tape, and a maximum of private initiative and action supplemented by the help of our government.

However, the physicians of America, through the AMA, are also working with allied health professionals, the government, and with others—including the people of this nation—to jointly solve many of the other health-oriented problems now facing America.

These programs will deal with such longer-range problems as the efficient utilization of medical and health personnel, increasing health manpower and resources in rural areas and the inner-city, moderating the costs of care and the need for custodial and home care for the elderly and disabled. Americans deserve no less.

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Personality Traits Predict Drug Use

Junior high school students who get poor grades and flout school rules are significantly more likely to use drugs during their high school years than are their more studious and orderly classmates.

This is among the findings of a continuing five-year study of Boston elementary, junior high and high school students reported at a recent seminar at the National Institute of Mental Health.

The study is being conducted by Dr. Gene M. Smith of Massachusetts General Hospital, under a grant from NIMH, a component of HEW's Health Services and Mental Health Administration.

The longitudinal study seeks to determine: 1) why some students become regular drug users, while others experiment with drugs or ignore them; 2) how personality traits and academic performance serve as predictors of involvement with or disinterest in drugs; and 3) what changes occur in attitudes, personality, and behavior after the initiation of drug use.

Students tested are a sample of a predominantly white, middle-class school population of 15,000 in 33 public schools in the Greater Boston area. They range from fourth-graders to high school seniors, and when they fill out questionnaires each year, they rate themselves on traits of personality and behavior, and identify their attitudes toward and their use of drugs. School records furnish histories of academic performance. A coding system guarantees confidentiality. Although participation is voluntary, approximately 95 per cent of students

present on testing days have taken part in the study.

In findings to date, the best indicator of subsequent use of illegal drugs is rebelliousness toward authorities and rules. Obedient children are the least likely to become drug users. The more rebellious a child, the greater his subsequent use of drugs is apt to be, ranging upward from infrequent marihuana smoking through frequent marihuana use to multiple experimentation and use—in addition to marihuana—of depressants, stimulants, LSD and other hallucinogens, and heroin.

Other reliable predictors of future drug use are classroom apathy and generally poor academic performance from middle grade school onward, and the early smoking of cigarettes. Indicative personality traits on which drug users score low are: conscientiousness, dependability, striving for recognition, setting high goals, persistence, planfulness, thoroughness, efficiency, mannerliness, and agreeableness. Two traits which do not predict future drug use or non-use are vigor and self-confidence.

Use of alcohol parallels the use of drugs: heavy marihuana smokers are heavy drinkers, and the study finds no evidence to support the belief that different generations use different drugs ("the parents drink, and the kids smoke") and that marihuana use might for many supplant drinking.

While there are notable differences in personality between those students who have never used drugs and those who have, infrequent and frequent drug users tend to have similar personalities.

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Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures.

Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision.

Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

Dosage: Individualize for maximum beneficial effect. **Adults:** Tension, anxiety and psychoneurotic states, 2 to 10 mg *b.i.d.* to *q.i.d.*; alcoholism, 10 mg *t.i.d.* or *q.i.d.* in first 24 hours, then 5 mg *t.i.d.* or *q.i.d.* as needed; adjunctively in skeletal muscle spasm, 2 to 10 mg *t.i.d.* or *q.i.d.*; adjunctively in convulsive disorders, 2 to 10 mg *b.i.d.* to *q.i.d.* **Geriatric or debilitated patients:** 2 to 2½ mg, 1 or 2 times daily initially, increasing as needed and tolerated. (See Precautions.) **Children:** 1 to 2½ mg *t.i.d.* or *q.i.d.* initially, increasing as needed and tolerated (not for use under 6 months).

Supplied: Valium® (diazepam) Tablets, 2 mg, 5 mg and 10 mg; bottles of 100 and 500. All strengths also available in Tel-E-Dose® packages of 1000.

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Announcement . . . U-100 II (Insulin, Lilly)

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U-100 Iletin promises significant patient benefits from standardized, simplified, and convenient Insulin therapy. It is available in six formulations.

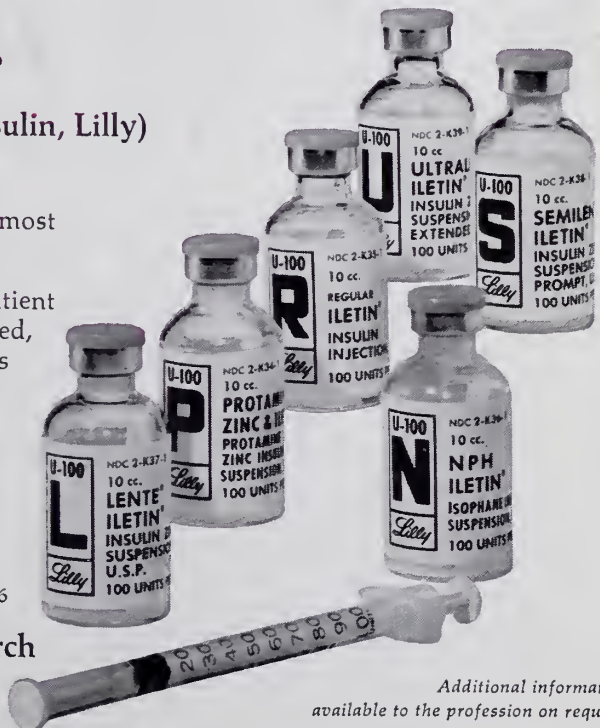
Note: A U-100 syringe must be used with U-100 Iletin.



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Before prescribing, please consult complete product information, a summary of which follows:

Indications: Relief of anxiety and tension occurring alone or accompanying various disease states.

Contraindications: Patients with known hypersensitivity to the drug.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards.

Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression: suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

Supplied: Librium® Capsules containing 5 mg, 10 mg or 25 mg chlordiazepoxide HCl. Libritabs® Tablets containing 5 mg, 10 mg or 25 mg chlordiazepoxide.

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